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LUMBER, LATH, AND SHINGLES

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FOREST PRODUCTS

LUMBER, LATH, AND SHINGLES

1912

COMPILED IN COOPERATION WITH THE DEPARTMENT OF AGRICULTURE : FOREST SERVICE, HENRY S. GRAVES, FORESTER

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This report on the statistics of forest products is compiled through the cooperation of the Bureau of the Census in the Department of Commerce and the Forest Service in the Department of Agriculture. The work has been conducted under the direct supervision of a committee of four, consisting of W. M. Steuart, chief statistician for manufactures, and J. E. Whelchel, representing the Bureau of the Census; and O. T. Swan, engineer in forest products, and A. H. Pierson, statistician in forest products, representing the Forest Service.

LUMBER, LATH, AND SHINGLES: 1912.

There are presented in this bulletin statistics of the production of lumber, lath, and shingles by 29,648 sawmills in the United States which were in operation during the whole or some part of the calendar year 1912, and each of which reported an output of 50,000 feet, board measure, or more. Schedules showing an output during the year of less than 50,000 feet each were received from 3,827 sawmills, for the most part small custom or neighborhood mills, whose product seldom finds a market beyond the immediate vicinity of its manufacture. For 1912, as for preceding years, the inquiry was conducted jointly by the Bureau of the Census of the Department of Commerce and the Forest Service of the Department of Agriculture. The statistics were secured almost entirely through correspondence by the Bureau of the Census, though returns for large establishments which had not reported at the close of the mail canvass were furnished by members of the Forest Service who visited mills in the leading lumber-producing regions. The statistics of the production in the state of New York were obtained from the Conservation Commission of that state. The tables showing lumber values were prepared from Forest Service records. The figures for 1911 and 1910, which are identical in both scope and composition with those for 1912, are presented, for purposes of comparison, by states and species.

LUMBER PRODUCTION.

Table 1 gives the number of active mills reporting and the total production of lumber, lath, and shingles in the United States for each year for which records are available from 1899 to 1909, inclusive.

TABLE 1.—LUMBER, LATH, AND SHINGLES—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY OF PRODUCTS, FOR SPECIFIED YEARS: 1899 TO 1912.

YEAR.	Number of active mills reporting.	Lumber (quantity, M feet b. m.).	Lath (quantity, thousands).	Shingles (quantity, thousands).
1912	29,648	39,158,414	2,719,163	12,037,685
1911	28,107	37,003,207	2,971,110	12,113,867
1910	31,934	40,018,282	3,494,718	12,976,362
1909	48,112	44,509,761	3,703,195	14,907,371
1908	31,231	33,224,369	2,986,684	12,106,483
1907	28,850	40,256,154	3,663,602	11,824,475
1906	22,398	37,550,736	3,812,807	11,858,260
1904	18,277	34,135,139	2,647,847	14,547,477
1899	31,833	35,084,166	2,523,998	12,102,017

As indicated by this comparative summary, substantial variations, both in the number of active mills covered by the tabulations and in the reported production of lumber, have taken place since 1899. Three of the years embraced in the showing—1899, 1904, and 1909—were regular census years, for which the information was secured largely by special agents; for the other years practically all of the data were collected through correspondence. The figures for 1899 and 1909 are substantially comparable, since the reports of all mills reporting a product valued at $500 or over, both merchant mills and custom mills, were included in both years. In 1904, however, the census of manufactures did not cover custom mills, and the enumeration of merchant mills was not as complete as in 1909. Statistics for the years 1906–1912, inclusive, with the exception of 1909, are comparable, though for 1910, 1911, and 1912 the reports of mills reporting less than 50,000 feet of lumber were excluded from the compilation. The reports of 4,100 mills of this class were omitted from the tabulation for 1910; of 3,900, for 1911; and of 3,827, for 1912. The total output of these small mills, however, was negligible, amounting in none of the three years to as much as one-half of 1 per cent of the aggregate output of all mills.

The amount of lumber cut in a given year is determined by a number of factors of too complicated relationship for adequate discussion here. The chief of these factors is of course the actual or prospective demand for lumber, but a falling off in demand does not always bring about a corresponding decline in production, since many operators will prefer to run their mills for a time without profit, or even at a loss, rather than to break up the organization of their operating force; and lumber manufacturing corporations having securities outstanding may likewise find it necessary to operate continuously, even at a loss, in order to maintain an income from which to pay interest charges. The stocks of lumber produced by these mills during periods when the market is dull are of course available to meet the first demands of a more active market, but any sustained increase in prices quickly brings about an increase in production; whence it is apparent that the mill capacity of the country is considerably greater than the normal production.

The greater part of the lumber produced goes into buildings and rough construction, about one-tenth into packing boxes, crates, etc., and much smaller proportions into car construction, furniture, vehicles, and a great variety of other uses. There is a strong tendency toward more permanent construction in building and toward the use of materials other than wood in many other industries, and the increasing competition of other materials has doubtless operated to restrict the demand for lumber and to retard the general rise in its price which might be expected to accompany the gradual exhaustion of the available timber supply.

During 1907, and especially in the earlier part of that year, the volume of building operations under way was unprecedented, and despite the fact that the business depression which commenced in that year and extended through 1908 affected building operations during the closing months of 1907, lumber mill operators regarded the situation as but temporary and reduced output did not follow until the continued unfavorable conditions of 1908 destroyed hope of an early improvement. In fact, the production of lumber in 1907 was larger than that reported for any other year except the census year 1909, for which the canvass was more complete, so that the figures are not strictly comparable. The production of 1908, however, was less by 7 billion feet, or 17.5 per cent, than that of 1907.

The period following the industrial depression of 1907–8 was characterized by lower wholesale prices for lumber and a larger output of lumber than the market could readily absorb. This condition continued with occasional temporary fluctuations in different markets until the close of 1911, when a general improvement became apparent in the trade. This improvement continued throughout the year 1912.

The annual production of lumber in the United States is affected only slightly by the foreign trade in this commodity. While the exports have for many years formed only a relatively small percentage of the total production, being in 1870, 5.3 per cent; in 1880, 5.3 per cent; in 1890, 5 per cent; in 1900, 7.1 per cent; and in 1910, 5.6 per cent, it is noteworthy that a steady increase during the past three years has occurred. In 1910 the exports of sawmill products reported in board measure amounted to 2,379,174,000 feet, valued at $52,588,448; in 1911, to 2,737,379,000 feet, valued at $60,013,397; and in 1912, to 2,912,552,000 feet, valued at $67,371,844. The leading countries to which lumber is exported from the United States are Canada, the United Kingdom, Argentina, Australia, Netherlands. Germany, Mexico, Cuba, Belgium, and France.

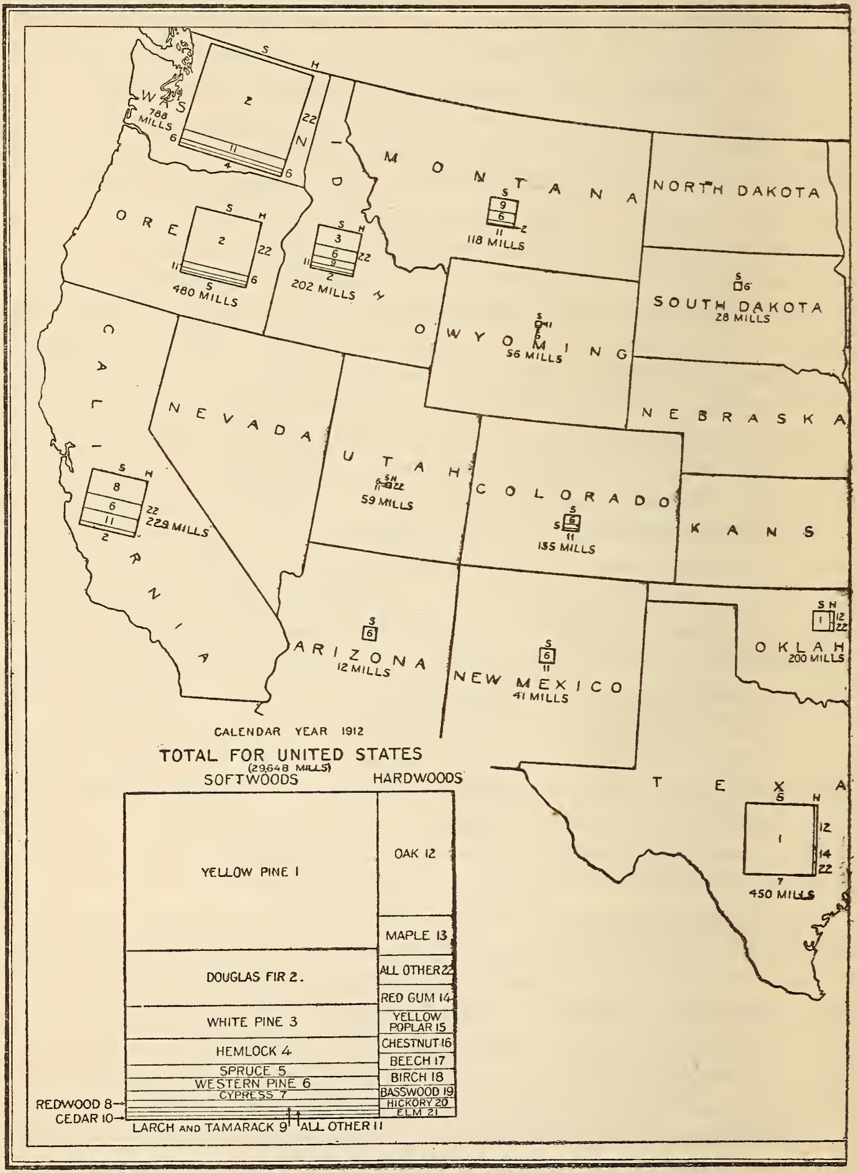
The imports of lumber and other mill products reported in board measure are much smaller than the exports.

In 1912 the imports amounted to 1,025,802,000 feet, valued at $17,883,048, by far the greater part of which came from Canada. Cabinet woods in the log constitute an important item of wood imports into the United States, but complete data respecting the volume of this trade are not available. These woods come, in the main, from Mexico, Central America, Africa, and Europe, and include Spanish cedar, mahogany, and Circassian walnut.

Table 2 shows, for the calendar years 1912, 1911, and 1910, the rank of the several states in lumber production, the number of active mills reporting, the quantity of lumber sawed, the percentage of the total output reported by each state, and the percentages of increase or decrease in production.

PRODUCTION OF THE DIFFERENT KINDS OF LUMBER,

[The squares printed on the map represent the total production of lumber in lines represent the production of softwood (S) and hardwood (H), respectively; and production of individual kinds of wood.]



BY STATES, FOR THE CALENDAR YEAR 1912.

the several states; the two parts of the squares separated by the vertical dividing
the numbered areas separated by the horizontal dividing lines represent the

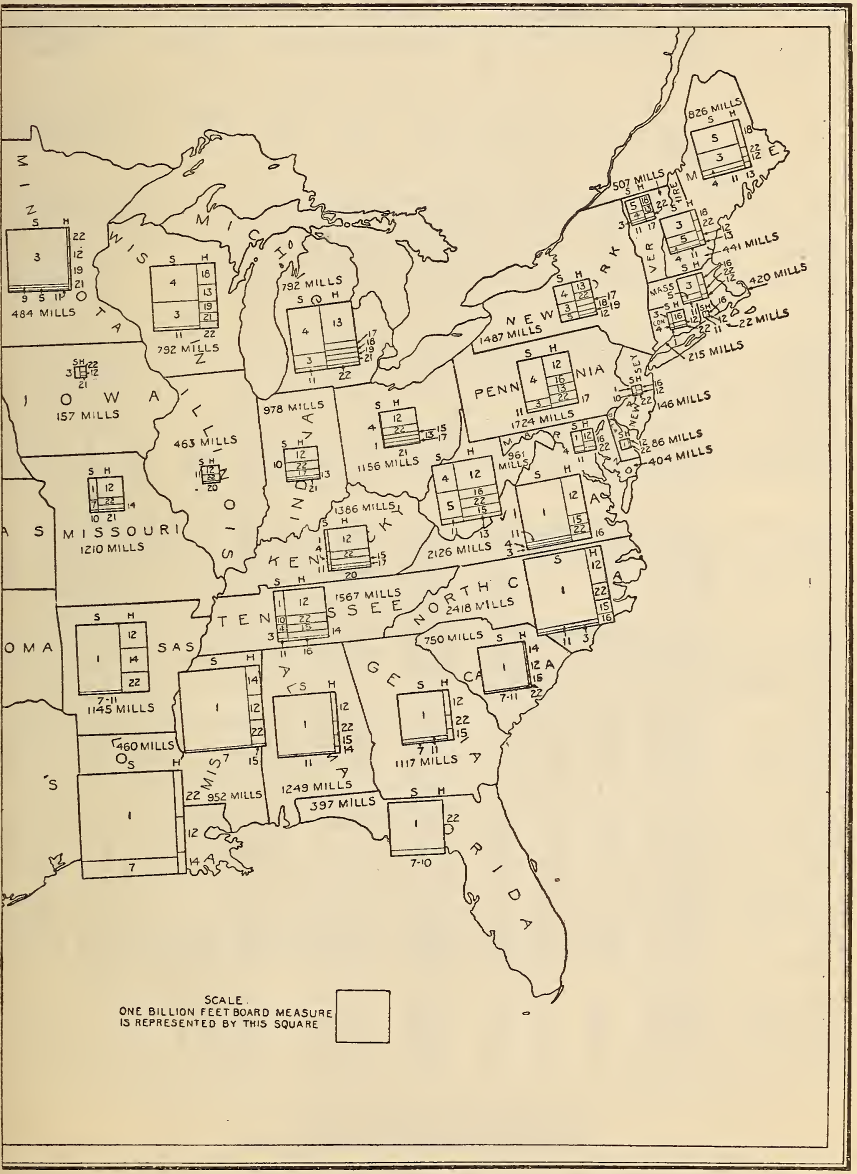


TABLE 2.—LUMBER, LATH, AND SHINGLES—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY OF LUMBER SAWED, WITH PERCENTAGE OF INCREASE AND PER CENT DISTRIBUTION, BY STATES: 1912, 1911, AND 1910.

STATE.	RANK OF STATE IN PRODUCTION.			NUMBER OF ACTIVE MILLS REPORTING.			LUMBER SAWED. Quantity (M feet b. m.).			Per cent of increase.[1]		Per cent distribution.		
	1912	1911	1910	1912	1911	1910	1912	1911	1910	1911 to 1912	1910 to 1911	1912	1911	1910
United States	..	..	..	29,648	28,107	31,934	39,158,414	37,003,207	40,018,282	5.8	−7.5	100.0	100.0	100.0
Washington	1	1	1	788	777	951	4,099,775	4,064,754	4,097,492	0.9	−0.8	10.5	11.0	10.2
Louisiana	2	2	2	460	502	497	3,876,211	3,566,456	3,733,900	8.7	−4.5	9.9	9.6	9.3
Mississippi	3	3	3	952	908	1,061	2,381,898	2,041,615	2,122,205	16.7	−3.8	6.1	5.5	5.3
North Carolina	4	5	8	2,418	2,071	2,368	2,193,308	1,798,724	1,824,722	21.9	−1.4	5.6	4.9	4.6
Oregon	5	4	4	480	522	574	1,916,160	1,803,698	2,084,633	6.2	−13.5	4.9	4.9	5.2
Texas	6	8	6	450	430	466	1,902,201	1,681,080	1,884,134	13.2	−10.8	4.9	4.5	4.7
Arkansas	7	6	7	1,145	1,127	1,260	1,821,811	1,777,303	1,844,446	2.5	−3.6	4.7	4.8	4.6
Virginia	8	12	10	2,126	2,005	2,286	1,569,997	1,359,790	1,652,192	15.5	−17.7	4.0	3.7	4.1
Wisconsin	9	7	5	792	771	872	1,498,876	1,761,986	1,891,291	−14.9	−6.8	3.8	4.8	4.7
Michigan	10	10	9	792	796	898	1,488,827	1,466,754	1,681,081	1.5	−12.7	3.8	4.0	4.2
Minnesota	11	9	12	484	467	499	1,436,726	1,485,015	1,457,734	3.3	1.9	3.7	4.0	3.6
Alabama	12	13	11	1,249	1,112	1,358	1,378,151	1,226,212	1,465,623	12.4	−16.3	3.5	3.3	3.7
West Virginia	13	11	13	961	994	1,069	1,318,732	1,387,786	1,376,737	−5.0	0.8	3.4	3.8	3.4
California	14	14	14	229	222	252	1,203,059	1,207,561	1,254,826	−0.4	−3.8	3.1	3.3	3.1
Florida	15	16	18	397	295	345	1,067,525	983,824	992,091	8.5	−0.8	2.7	2.7	2.5
Pennsylvania	16	15	15	1,724	1,636	1,847	992,180	1,048,606	1,241,199	−5.4	−15.5	2.5	2.8	3.1
Georgia	17	19	16	1,117	952	1,265	941,291	801,611	1,041,617	17.4	−23.0	2.4	2.2	2.6
Tennessee	18	17	17	1,567	1,536	1,774	932,572	914,579	1,016,475	2.0	−10.0	2.4	2.5	2.5
Maine	19	18	19	826	817	856	882,128	828,417	860,273	6.5	−3.7	2.3	2.2	2.1
South Carolina	20	22	22	750	541	693	816,930	584,872	706,831	39.7	−17.3	2.1	1.6	1.8
Idaho	21	20	21	202	209	229	713,575	765,670	745,984	−6.8	2.6	1.8	2.1	1.9
Kentucky	22	21	20	1,386	1,452	1,660	641,296	632,415	753,556	1.4	−16.1	1.6	1.7	1.9
New York	23	23	23	1,487	1,520	1,468	502,351	526,283	506,074	−4.6	4.0	1.3	1.4	1.3
Ohio	24	24	25	1,156	1,009	1,148	499,834	427,161	490,039	17.0	−12.8	1.3	1.2	1.2
New Hampshire	25	26	26	441	397	474	479,499	388,619	443,907	23.4	−12.5	1.2	1.0	1.1
Missouri	26	25	24	1,210	1,112	1,325	422,470	418,586	501,691	0.9	−16.6	1.1	1.1	1.3
Indiana	27	27	27	978	915	1,044	401,017	360,613	422,963	11.2	−14.7	1.0	1.0	1.1
Montana	28	30	28	118	126	140	272,174	228,416	319,089	19.2	−28.4	0.7	0.6	0.8
Massachusetts	29	28	30	420	430	459	259,329	273,317	239,206	−5.1	14.3	0.7	0.7	0.6
Vermont	30	29	29	507	498	542	235,983	239,254	284,815	−1.4	−16.0	0.6	0.6	0.7
Maryland	31	31	32	404	389	431	174,320	144,078	154,554	21.0	−6.8	0.4	0.4	0.4
Oklahoma	32	32	31	200	174	234	168,806	143,869	164,663	17.3	−12.6	0.4	0.4	0.4
Illinois	33	34	35	463	394	452	122,528	96,651	113,506	26.8	−14.8	0.3	0.3	0.3
Connecticut	34	33	33	215	218	256	109,251	124,661	126,463	−12.4	−0.4	0.3	0.3	0.3
Colorado	35	35	34	135	156	169	88,451	95,908	121,398	−7.8	−21.0	0.2	0.3	0.3
New Mexico	36	36	36	41	47	54	82,650	83,728	83,544	−1.3	0.2	0.2	0.2	0.2
Arizona	37	37	38	12	12	13	76,287	73,139	72,655	4.3	0.7	0.2	0.2	0.2
Iowa	38	38	37	157	160	186	46,593	59,974	75,446	−22.3	−20.5	0.1	0.2	0.2
New Jersey	39	40	40	146	136	156	34,810	28,639	36,542	21.5	−21.6	0.1	0.1	0.1
Delaware	40	41	39	86	82	89	28,285	23,853	46,642	18.6	−48.9	0.1	0.1	0.1
South Dakota	41	42	42	28	28	35	20,986	13,046	16,340	60.9	−20.2	0.1	(2)	(2)
Rhode Island	42	44	43	22	20	24	14,421	9,016	14,392	59.9	−37.4	(2)	(2)	(2)
Wyoming	43	39	41	56	75	81	13,560	33,309	30,931	−59.3	7.7	(2)	0.1	0.1
Utah	44	43	44	59	62	63	9,055	10,573	11,786	−14.4	−10.3	(2)	(2)	(2)
All other states[3]	..	..	..	12	5	11	22,525	11,786	12,594	91.1	−6.4	0.1	(2)	(2)

[1] A minus sign (−) denotes decrease.
[2] Less than one-tenth of 1 per cent.
[3] Includes Kansas, Nebraska, and Nevada.

On the whole, the showing for 1912 reflects improved conditions in the lumber industry. The total production was greater than in 1911 by 2,155,207,000 feet, or 5.8 per cent, and although the total reported production was slightly less than in 1910, the average per mill was somewhat greater than in that year. A noteworthy feature of the showing is the fact that while 38 of the 47 states reporting lumber production in all of the three years show decreases from 1910 to 1911, all but 15 reported a larger output in 1912 than in 1911. Of the 22 states embraced within the limits of the three leading lumber manufacturing areas—the Southern states, the Lake states, and the Pacific Coast states—18 reported an increased production in 1912 as compared with the preceding year. The four states which showed decreases were West Virginia, Minnesota, Wisconsin, and California. Furthermore, while the 6 states ranking highest in lumber production in 1911 each showed a decrease from the figures of the preceding year, the same states in 1912 reported larger outputs than in 1911. The reported production in Washington in 1912 was the largest recorded since 1906. For nearly a decade this state has led all others in the production of lumber and shingles, and in 1912 it contributed more than one-tenth of all the lumber and nearly two-thirds of the shingles manufactured in the United States. It is not improbable that in the near future Washington will pass the record made by Michigan in 1890, when a production of 4,311,240,000 feet was reported, a figure which marks the highest point yet reached by any state in the history of lumber production.

Table 3 shows, for the calendar years 1912, 1911, and 1910, the production of the different kinds of wood, the percentages of increase or decrease, and the per cent distribution.

Of the 55 woods manufactured into lumber during the calendar year 1912 and here listed under common designations (which often include a number of species), 14 were softwoods and 41 hardwoods. The softwoods contributed 30,526,416,000 feet, or 78 per cent of the total production, and the hardwoods 8,631,998,000 feet, or 22 per cent. Yellow pine alone supplied nearly one-half of the total output of softwood lumber, and this species, together with Douglas fir, white pine, and hemlock, more than five-sixths. Oak, which ranked third among all woods and first among the hardwoods, supplied 38.4 per cent of the output of hardwood lumber, and together with maple, red gum, tulip poplar, chestnut, and beech, 77 per cent.

TABLE 3.—LUMBER, LATH, AND SHINGLES—QUANTITY OF LUMBER SAWED, WITH PERCENTAGE OF INCREASE AND PER CENT DISTRIBUTION, BY KINDS OF WOOD: 1912, 1911, and 1910.

KIND OF WOOD.	Rank in production, 1912.	LUMBER SAWED.							
		Quantity (M feet b. m.).			Per cent of increase.[1]		Per cent distribution.		
		1912	1911	1910	1911 to 1912	1910 to 1911	1912	1911	1910
Total	......	39,158,414	37,003,207	40,018,282	5.8	−7.5	100.0	100.0	100.0
Yellow pine	1	14,737,052	12,896,706	14,143,471	14.3	−8.8	37.6	34.9	35.3
Douglas fir	2	5,175,123	5,054,243	5,203,644	2.4	−2.9	13.2	13.7	13.0
Oak	3	3,318,952	3,098,444	3,522,098	7.1	−12.0	8.5	8.4	8.8
White pine	4	3,138,227	3,230,584	3,352,183	−2.9	−3.6	8.0	8.7	8.4
Hemlock	5	2,426,554	2,555,308	2,836,129	−5.0	−9.9	6.2	6.9	7.1
Spruce	6	1,238,600	1,261,728	1,449,912	−1.8	−13.0	3.2	3.4	3.6
Western pine	7	1,219,444	1,330,700	1,562,106	−8.4	−14.8	3.1	3.6	3.9
Maple	8	1,020,864	951,667	1,006,637	7.3	−5.5	2.6	2.6	2.5
Cypress	9	997,227	981,527	935,659	1.6	4.9	2.5	2.7	2.3
Red gum	10	694,260	582,967	610,208	19.1	−4.5	1.8	1.6	1.5
Tulip poplar	11	623,289	659,475	734,926	−5.5	−10.3	1.6	1.8	1.8
Chestnut	12	554,230	529,022	535,049	4.8	−1.1	1.4	1.4	1.3
Redwood	13	496,796	489,768	543,493	1.4	−9.9	1.3	1.3	1.4
Beech	14	435,250	403,881	437,325	7.8	−7.6	1.1	1.1	1.1
Larch	15	407,064	368,216	382,514	10.6	−3.7	1.0	1.0	1.0
Birch	16	388,272	432,571	420,769	−10.2	2.8	1.0	1.2	1.1
Cedar	17	329,000	374,925	415,039	−12.2	−9.7	0.8	1.0	1.0
Basswood	18	296,717	304,621	344,704	−2.6	−11.6	0.8	0.8	0.9
Hickory	19	278,757	240,217	272,252	16.0	−11.8	0.7	0.6	0.7
Elm	20	262,141	236,108	265,107	11.0	−10.9	0.7	0.6	0.7
Ash	21	234,548	214,398	246,035	9.4	−12.9	0.6	0.6	0.6
Cottonwood	22	227,477	198,629	220,305	14.5	−9.8	0.6	0.5	0.6
Sugar pine	23	132,416	117,987	103,165	12.2	14.4	0.3	0.3	0.3
White fir	24	122,613	124,307	132,327	−1.4	−6.1	0.3	0.3	0.3
Tupelo	25	122,545	98,142	92,071	24.9	6.6	0.3	0.3	0.2
Balsam fir	26	84,261	83,375	74,580	1.1	11.8	0.2	0.2	0.2
Sycamore	27	49,468	42,836	45,063	15.5	−4.9	0.1	0.1	0.1
Walnut	28	43,083	38,293	36,449	12.5	5.1	0.1	0.1	0.1
Lodgepole pine	29	22,039	33,014	26,634	−33.2	24.0	0.1	0.1	0.1
All other kinds[2]	......	82,145	69,548	68,428	18.1	1.6	0.2	0.2	0.2

[1] A minus sign (−) denotes decrease.

[2] See Table 32 for kinds of wood included and quantities of the more important varieties.

YELLOW PINE.

The yellow pine lumber represented by Table 4 is cut from a number of species having their ranges east of the Rocky Mountains. The most important are longleaf pine (*Pinus palustris*), shortleaf pine (*Pinus echinata*), and loblolly pine (*Pinus taeda*). These are all southern trees, but shortleaf pine is found in commercial quantities as far north as Missouri and Maryland and is met with in scattered stands through Kentucky and West Virginia. The largest quantities of shortleaf pine lumber, however, are manufactured in the Gulf States. Loblolly pine occupies about half as great an area as shortleaf, and the best stands are in Virginia and southward to Florida. The principal output of longleaf pine is reported by mills in Texas, Louisiana, and eastward to Georgia and South Carolina. Other southern pines belonging in this group are spruce pine (*Pinus glabra*), Cuban pine (*Pinus heterophylla*), pond pine (*Pinus serotina*), and sand pine (*Pinus clausa*). Their combined output of lumber is small. Two northern species, scrub pine (*Pinus virginiana*) and pitch pine (*Pinus rigida*), whose ranges extend to the middle South, are also included in the statistics of yellow pine lumber. Both are rather indifferent timber trees. Pitch pine grows from Maine to Tennessee, but is scarce west of the Appalachian Mountains. Scrub pine occurs from New Jersey to South Carolina and westward to middle Tennessee and Indiana. A scarce species, table mountain pine (*Pinus pungens*), which is found among the mountains from Tennessee to Pennsylvania, naturally belongs in the group and is probably so classed when it reaches lumber yards. Western yellow pine (*Pinus ponderosa*) is not included here but is shown in Table 10 as "western pine."

TABLE 4.—LUMBER, LATH, AND SHINGLES—**Yellow Pine Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	YELLOW PINE LUMBER SAWED.			STATE.	YELLOW PINE LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	11,045	14,737,052	100.0	Virginia	1,562	989,622	6.7
				Florida	270	960,735	6.5
Louisiana	322	2,928,632	19.9	Georgia	1,066	799,370	5.4
Mississippi	754	2,029,276	13.8	South Carolina	719	751,198	5.1
Texas	380	1,833,902	12.4	Oklahoma	78	122,685	0.8
North Carolina	2,026	1,658,744	11.3	Tennessee	454	94,159	0.6
Alabama	1,119	1,214,994	8.2	Maryland	229	59,144	0.4
Arkansas	604	1,133,459	7.7	All other states [1]	1,462	161,132	1.1

[1] Includes establishments distributed as follows: Connecticut, 22; Delaware, 66; Illinois, 2; Indiana, 4; Kansas, 1; Kentucky, 258; Maine, 36; Massachusetts, 48; Missouri, 206; Nebraska, 1; New Hampshire, 18; New Jersey, 62; Ohio, 35; Pennsylvania, 434; Rhode Island, 10; Vermont, 28; and West Virginia, 231.

Thirty states are credited with the production of yellow pine lumber in 1912. In two of the states—Kansas and Nebraska—none grows naturally, and in several others very little. The production of lumber in such states can be accounted for only on the assumption that logs were shipped to the mills to be sawed.

More than half of the yellow pine lumber is produced by the four states of Louisiana, Mississippi, Texas, and North Carolina, named in the order of their production. The largest yellow pine mills in the country are those of Louisiana. The average output per mill in that state in 1912 exceeded 9,000,000 feet.

DOUGLAS FIR.

Probably no other single species furnishes as much lumber at the present time as the Douglas fir. No tree surpasses it in symmetrical form of trunk and few equal it in size. In fact, larger timbers are sawed from Douglas fir than from any other wood; and the lumber is exported to many parts of the world. The color and other characteristics of the wood differ considerably in various localities, by reason, it is supposed, of differences in soil and situation. Partly on account of these variations, a considerable number of names have been applied to Douglas fir, among which may be mentioned "Douglas spruce," "red spruce," "yellow fir," "red fir," "Oregon pine," and "Puget Sound pine." Some of these terms are still used to a greater or less extent, but the name "Douglas fir" is now very generally agreed upon and is being adopted in most parts of the world where the wood is known.

The species is dispersed over a range of more than 1,000,000 square miles, counting its extension through British Columbia into Alaska. Its best development takes place in the damp regions of the Pacific coast, but the tree is of timber size among the Rocky Mountains eastward from Washington to Montana and thence southward to New Mexico.

TABLE 5.—LUMBER, LATH, AND SHINGLES—**Douglas Fir Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	DOUGLAS FIR LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	1,100	5,175,123	100.0
Washington	414	3,381,395	65.3
Oregon	375	1,589,670	30.7
California	72	105,625	2.0
Idaho	106	51,845	1.0
Montana	75	39,325	0.8
All other states[1]	58	7,263	0.1

[1] Includes establishments distributed as follows: Colorado, 25; New Mexico, 5; South Dakota, 1; Utah, 13; and Wyoming, 14.

The output of Douglas fir lumber in 1912 was only slightly greater than in 1911, and somewhat less than in 1910. The most important states in its production are Washington and Oregon, but eight other states contribute to the total output. The average production per mill in 1912 was 4,705,000 feet, but the mills of Washington averaged 8,168,000 feet—somewhat less than the average of the yellow pine mills in Louisiana.

OAKS.

More than fifty species of oak occur in the United States, one or more being found in every state, but less than one-third of them are of commercial importance. Six or seven species supply the bulk of the lumber, but separate returns are not made for the different species, and it is not possible to give figures to show their relative importance in the lumber market. Two general classes are recognized by mill men—white oaks and red oaks. From the standpoint of some botanists all the oaks in America belong in one or the other of these two classes. The acorns of white oaks mature in one year, but two seasons are required to ripen the acorns of the red oaks. This is a botanical grouping, however; lumbermen do not differentiate on this basis. With them the red oaks are those which produce lumber of a reddish tinge; the others are white oaks. The most important of the latter class are the common white oak (*Quercus alba*), post oak (*Quercus minor*), bur oak (*Quercus macrocarpa*), overcup, often called forked-leaf white oak in the South (*Quercus lyrata*), cow oak (*Quercus michauxii*), and chestnut oak (*Quercus prinus*). The six most valuable species in the red oak group are the common northern red oak (*Quercus rubra*), the common southern or Texan red oak (*Quercus texana*), pin oak (*Quercus palustris*), scarlet oak (*Quercus coccinea*), yellow or black oak (*Quercus velutina*), and the southern willow oak (*Quercus phellos*). The bulk of the oak lumber of the United States (probably 98 per cent of it) is sawed from the twelve species of oak listed above, probably about half from the white oaks and half from the red. The single species credited with furnishing the most lumber is the common white oak, while the Texan red oak is probably second. Table 6 presents statistics as to the production for all oaks combined.

TABLE 6.—LUMBER, LATH, AND SHINGLES—**Oak Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	OAK LUMBER SAWED.			STATE.	OAK LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	18,259	3,318,952	100.0	Louisiana..........	119	98,271	3.0
				Alabama...........	592	73,316	2.2
West Virginia......	915	404,637	12.2	Illinois.............	452	59,125	1.8
Tennessee..........	1,436	378,747	11.4	Maryland..........	334	48,707	1.5
Kentucky...........	1,308	321,656	9.7	Texas...............	138	39,758	1.2
Virginia............	1,584	279,580	8.4	Georgia.............	505	38,135	1.1
Arkansas...........	771	260,397	7.8	Wisconsin..........	500	29,504	0.9
Ohio................	1,098	222,704	6.7	Oklahoma..........	153	25,885	0.8
Pennsylvania......	1,432	209,473	6.3	New York.........	739	24,590	0.7
Missouri............	1,126	206,147	6.2	Connecticut........	188	20,256	0.6
North Carolina.....	1,459	187,066	5.6	Michigan..........	338	18,124	0.5
Indiana.............	916	166,637	5.0	New Hampshire...	262	15,134	0.5
Mississippi.........	398	102,431	3.1	All other states[1] ...	1,496	88,672	2.7

[1] Includes establishments distributed as follows: Arizona, 1; California, 5; Delaware, 59; Florida, 8; Iowa, 137; Kansas, 7; Maine, 214; Massachusetts, 266; Minnesota, 287; New Jersey, 103; New Mexico, 1; Oregon, 12; Rhode Island, 22; South Carolina, 223; Vermont, 147; Washington, 3; and Wyoming, 1.

West Virginia stands first among the 40 states listed as producers of oak lumber, and Tennessee second. These two states have changed places since 1911, when Tennessee was first and West Virginia second. Six states, including the two mentioned above and Kentucky, Virginia, Arkansas, and Ohio, produced in 1912, 56.3 per cent of the country's output of oak lumber. The average output of the 18,259 mills sawing oak in 1912 was 182,000 feet. The number of mills which sawed oak exceeded the number reporting any other single kind of wood. More than three-fifths (61.6 per cent) of all the mills in the United States produced oak lumber, and this wood was reported from more of the states than any other wood except cottonwood.

WHITE PINE.

Four species at least are covered by the statistics for white pine which are presented in Table 7, three occurring east of the Rocky Mountains and one west. The most important species is the common white pine (*Pinus strobus*), which grows in New England, the Lake states, and New York, Pennsylvania, and southward along the Appalachian ranges of mountains. Norway pine (*Pinus resinosa*) is now cut chiefly in the Lake states, but its range extends eastward to New England, though it does not run very far south of the northern tier of states. When the forests were in their natural condition, the heaviest stands were, probably, in Michigan. During the years of heavy lumbering in Michigan and Wisconsin these two pines were cut and marketed together, though it is not difficult to distinguish one from the other in the forest, and there is enough difference in the appearance of the lumber of the two woods to make their separation easy in the lumber yard; but it was not customary to do this at that time, nor is it usually done now. Jack Pine (*Pinus divaricata*) is a small tree, not of great value for lumber, but such as is cut passes for white pine, at least in the statistics. It is a species of the far north, and only the southern rim of its range runs down into the United States, reaching as far south as northern Pennsylvania and northern Indiana. The Western or Idaho white pine (*Pinus monticola*) resembles the eastern or common white pine more nearly than does the Norway or the Jack Pine. Its range extends through Montana, Idaho, and Washington, and to some extent into the bordering regions. The production reported from New Mexico could not well have been any one of the four species named above, and was probably some one of the native pines of that state, possibly the Mexican white pine (*Pinus strobiformis*).

The output of the western or Idaho white pine in 1912 was 362,759,000 feet. Probably other pines contributed to the output credited to Colorado, Utah, and Wyoming. The wood of a number of species growing in the Rocky Mountains and the Great Basin region might pass for white pine. The western yellow pine (*Pinus ponderosa*) is also often sold as white pine or California white pine, and may have been reported as white pine in some instances.

Michigan, which for years led all other states in the production of white pine lumber, ranked seventh in 1912. Three New England states surpassed it in that year, while Idaho reported a production more than twice as large. Minnesota led in 1912, with an output of white pine lumber more than three times as great as that of its nearest competitor. This state has doubtless passed the period of its greatest production, and a decline may be expected soon. It is not probable that the decline will be as rapid or that its output will fall as low as that of Michigan, however, because Minnesota is practicing better forestry methods than obtained in Michigan during the period of its greatest production and of its decline. Fires are more successfully kept out of the cut-over lands in Minnesota, and the small trees will grow up and eventually seed the ground. In Michigan it was otherwise, fires usually following the lumbermen and generally making a clean sweep of all the young pines, leaving none to raise seed.

TABLE 7.—LUMBER, LATH, AND SHINGLES—**White Pine Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	WHITE PINE LUMBER SAWED.			STATE.	WHITE PINE LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	5,733	3,138,227	100.0	Pennsylvania......	810	71,870	2.3
				North Carolina.....	343	60,727	1.9
Minnesota..........	305	1,225,674	39.1	Washington........	18	41,762	1.3
Wisconsin..........	491	397,549	12.7	Virginia............	298	26,193	0.8
Idaho..............	46	309,564	9.9	Tennessee..........	180	23,646	0.8
Maine..............	588	280,145	8.9	Iowa................	8	22,324	0.7
New Hampshire...	390	240,215	7.7	West Virginia......	138	19,740	0.6
Massachusetts......	380	143,119	4.6	Vermont...........	143	16,664	0.5
Michigan...........	349	141,003	4.5	Connecticut........	106	16,422	0.5
New York.........	963	76,355	2.4	All other states [1]...	177	25,255	0.8

[1] Includes establishments distributed as follows: Colorado, 1; Georgia, 27; Indiana, 1; Kentucky, 36; Maryland, 38; Montana, 9; New Jersey, 10; New Mexico, 2; Ohio, 10; Oregon, 3; Rhode Island, 18; South Carolina, 13; Utah, 6; and Wyoming, 3.

HEMLOCK.

Four species of hemlock are found in the United States, but the principal supply of lumber comes from the common hemlock (*Tsuga canadensis*), which grows in the Northern states from Maine to Wisconsin, and southward along the mountain ranges of West Virginia, Virginia, Kentucky, Tennessee, and the Carolinas. The western hemlock (*Tsuga heterophylla*) occurs from Montana to the Pacific coast, and southward to central California. Of the 2,426,554,000 feet of hemlock lumber reported in 1912, the western species furnished about 200,000,000 feet. Carolina hemlock (*Tsuga caroliniana*) is of small commercial importance and is confined to the mountain ranges from Virginia to Georgia. Mountain hemlock (*Tsuga mertensiana*), sometimes called black hemlock, is a native of the high and bleak mountains of the West, from British Columbia and Idaho to California. It is of even less importance as a source of lumber than the Carolina hemlock.

Hemlock lumber appears to have passed its greatest production, at least as far as the eastern species are concerned. It is not impossible that, when the western hemlock resources are fully developed, the annual production may again rise until it approaches, if it does not equal, the highest output in the past.

In size the trees of the western hemlock average larger than those of the eastern species. At the present time the region where western hemlock grows has enormous quantities of other and more desirable timber, such as Douglas fir, western red cedar, western larch, and various firs and spruces, the result being that the demand for hemlock in that market is small.

The case is different with the eastern tree. With the decline in the supply of white pine, it has been called on to meet an enormous demand and is being marketed from all regions where it grows. The result is a drain on the hemlock forests from New England to Wisconsin, and the high water mark of production seems to have been passed. If land from which white pine has been cut is protected from fire, and a few seed trees are left, a young stand may be expected; but there is little such promise in hemlock. Seeds of this species scattered in the open are almost certain to perish, and seed trees left when the surrounding forest is cut away are apt to die.

TABLE 8.—LUMBER, LATH, AND SHINGLES—**Hemlock Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	HEMLOCK LUMBER SAWED.			STATE.	HEMLOCK LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	5,614	2,426,554	100.0	Maine..............	567	89,142	3.7
				New Hampshire...	331	51,289	2.1
Wisconsin..........	413	610,421	25.2	Virginia............	165	39,185	1.6
Michigan............	473	535,446	22.1	Vermont...........	392	36,784	1.5
Pennsylvania.......	827	386,188	15.9	North Carolina.....	157	35,539	1.5
West Virginia......	263	215,893	8.9	Oregon............	32	30,681	1.3
Washington........	98	161,630	6.7	Tennessee..........	105	30,486	1.3
New York..........	1,254	123,924	5.1	All other states [1]...	537	79,946	3.3

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[1] Includes establishments distributed as follows: California, 2; Connecticut, 104; Idaho, 3; Indiana, 3; Kentucky, 108; Maryland, 24; Massachusetts, 232; Minnesota, 4; Montana, 1; New Jersey, 9; Ohio, 40; Rhode Island, 3; and South Carolina, 4.

SPRUCE.

The statistics of spruce lumber presented in Table 9 cover at least half a dozen species, dispersed throughout the important timberland regions of the northern part of the United States, from the Atlantic to the Pacific. The wood of all these is very similar, however, and spruce is merchantable wherever it can be had of proper size. The most valuable species in the east is the red spruce (*Picea rubens*), which is cut for lumber in New England and southward from Pennsylvania along the mountains nearly to northern Georgia. The heaviest of the southern spruce forests are on the summits of the highest ranges of mountains in West Virginia. Black spruce (*Picea mariana*) is found on bottom lands in New England and westward to Minnesota, and is cut in considerable quantities in the Lake states. It is usually a smaller tree than the red spruce, and consequently less valuable. White spruce (*Picea canadensis*) is of some importance in Minnesota, where it is better developed than in any other part of this country, though it occurs at intervals near the northern border all the way from New York to the Pacific Ocean. It is a northern species and is found throughout a large part of Canada, almost or quite to the Arctic circle. Two commercial spruces occur among the Rocky Mountains and westward. Engelmann spruce (*Picea engelmanni*) is found in most parts of the Rocky Mountains. The trees vary greatly in form and size, those on sterile and exposed mountain slopes developing tapering, knotty trunks, while those in protected situations and on fertile soils grow straight and clear. Much more important in the Western states than the Engelmann spruce is the Sitka spruce (*Picea sitchensis*), which ranges near the coast from Alaska to California. At its best it is a much larger tree than any of the other spruces. The cut of Sitka spruce in 1912 was about 223,000,000 feet and that of Engelmann spruce about 33,000,000. The distribution of the output among the three northern and eastern species, red, black, and white spruce, can only be approximated by crediting to each the production in the territory where it is the predominant spruce. On that basis the output of red spruce may be placed at 860,000,000 feet and that of black and white together at about 100,000,000 feet.

TABLE 9.—LUMBER, LATH, AND SHINGLES—**Spruce Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	SPRUCE LUMBER SAWED.			STATE.	SPRUCE LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	2,445	1,238,600	100.0	Minnesota..........	170	67,639	5.5
				New York.........	298	51,519	4.2
Maine..............	534	365,331	29.5	Massachusetts......	76	38,805	3.1
West Virginia......	72	216,589	17.5	Colorado...........	70	19,301	1.6
Washington........	58	139,325	11.2	Michigan...........	152	14,776	1.2
New Hampshire....	207	115,301	9.3	Virginia...........	45	13,901	1.1
Vermont...........	396	72,379	5.8	Wisconsin..........	82	12,941	1.0
Oregon............	31	70,938	5.7	All other states [1]...	254	39,855	3.2

[1] Includes establishments distributed as follows: California, 21; Connecticut, 7; Idaho, 10; Kentucky, 34; Maryland, 32; Montana, 30; New Jersey, 2; New Mexico, 10; North Carolina, 32; Ohio, 7; Pennsylvania, 22; South Carolina, 2; Tennessee, 14; Utah, 14; and Wyoming. 17.

The output of spruce lumber has been declining for several years, and in the East the decline may be expected to continue, because all the principal sources of supply are now contributing and many stands are decreasing. The production of the western species may increase in response to demand. Of the several states Maine is now the largest producer of spruce lumber, West Virginia second, and Washington third. The large output of spruce for pulp is not included in the statistics of Table 9. If added, it would nearly double the figures.

WESTERN PINE.

The range of western pine (*Pinus ponderosa*) covers a million square miles, extending from the Rocky Mountains to the Pacific and from Mexico to British Columbia. Next to Douglas fir it is the most abundant of the western timbers. It is cut for lumber in 12 states, California leading in quantity. The mills which convert western pine timber into lumber are well distributed throughout the Rocky Mountain region and some are found as far east as the Black Hills of South Dakota.

The tree is botanically a yellow pine, but it goes to market as a white pine under various names. One of the common terms by which it is known in the Mississippi Valley and eastward is "California white pine," and the name "New Mexico white pine" is frequently used. The wood is less resinous than most species of yellow pine, and the annual rings usually lack the large proportion of dense summer wood which gives longleaf pine its hardness and its striking figure. The better grades of lumber from this species and from the Idaho white pine (*Pinus monticola*) are much alike, and controversies often arise as to which is called for in a contract specifying "western pine."

Several minor species of pine in the West are cut in small quantities and are marketed with western pine without distinction.

TABLE 10.—LUMBER, LATH, AND SHINGLES—**Western Pine Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	WESTERN PINE LUMBER SAWED.			STATE.	WESTERN PINE LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	827	1,219,444	100.0	Montana	80	94,093	7.7
				New Mexico	37	76,772	6.3
California	126	365,169	29.9	Arizona	12	76,286	6.3
Idaho	145	179,863	14.7	Colorado	70	51,732	4.2
Washington	142	177,108	14.5	South Dakota	24	20,526	1.7
Oregon	135	152,769	12.5	All other states [1]	56	25,126	2.1

[1] Includes establishments distributed as follows: Nevada, 1; Utah, 32; and Wyoming, 23.

The finest western pine is found in California on the western slopes of the Sierra Nevada Mountains, where trees 4 feet in diameter are common and some are twice that size. Such trunks produce a high percentage of clear lumber. In regions and situations less favorable this pine fails to develop some of its best characteristics, the trees being smaller and the wood harder. The lumber production from this pine does not seem to be increasing. The quantity of available timber is very large, but the cut is limited by what the market will absorb.

The average production of western yellow pine lumber per mill for the whole country in 1912 was 1,475,000 feet; for California it was 2,898,000 feet; and in Arizona, which shows the highest average, it was 6,357,000 feet.

MAPLE.

Eight or more species of maple figure in the lumber resources of this country, and they are reported from 36 states, but usually without any attempt to distinguish between species, except that a general grouping of hard and soft maples is recognized. Practically all hard maple is the product of the sugar maple (*Acer saccharum*), while most soft maple is cut from two species—silver maple (*Acer saccharinum*) and red maple (*Acer rubrum*).

Small quantities may be credited to the mountain maple (*Acer spicatum*), a small tree that grows in the Northern states and along the Appalachian ranges to Georgia. The striped maple (*Acer pennsylvanicum*), likewise a small tree with practically the same range as mountain maple, is occasionally cut for lumber. Red maple is of more value and of larger size, but it seldom occurs in great abundance in any region. Its range covers the eastern half of the United States. It is called red maple because of the color of the flowers and fruit, not the color of the wood. The term "silver maple" is not used to any extent by lumbermen, but is employed by the botanist and nurseryman to designate the tree which woodsmen call soft maple, and from which most of the soft maple lumber is cut. Sugar maple or hard maple is the most common and most valuable of all. It is primarily a northern species, but its range runs south to Florida and Texas; it is not abundant, however, south of Tennessee. The Oregon maple (*Acer macrophyllum*) occurs in Washington, Oregon, and California, but the annual production in those states is small. Box elder (*Acer negundo*) is one of the minor maples which makes a small contribution to the supply. It grows from New England to New Mexico, but is most abundant in the upper Mississippi Valley.

The total production of maple lumber has not shown much increase or decrease in recent years, nor have there been marked changes in any of the different regions.

TABLE 11.—LUMBER, LATH, AND SHINGLES—**Maple Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	MAPLE LUMBER SAWED.			STATE.	MAPLE LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	8,092	1,020,864	100.0	Ohio	826	46,750	4.6
				Indiana	668	33,032	3.2
Michigan	602	453,110	44.4	Vermont	370	30,435	3.0
Wisconsin	510	118,765	11.6	Tennessee	209	14,845	1.5
Pennsylvania	1,020	81,617	8.0	Maine	238	11,423	1.1
New York	1,071	76,891	7.5	New Hampshire	187	11,256	1.1
West Virginia	339	74,182	7.3	All other states [1]	2,052	68,558	6.7

[1] Includes establishments distributed as follows: Alabama, 22; Arkansas, 77; Connecticut, 104; Delaware, 19; Florida, 1; Georgia, 26; Illinois, 224; Iowa, 96; Kansas, 1; Kentucky, 343; Louisiana, 1; Maryland, 76; Massachusetts, 156; Minnesota, 95; Mississippi, 33; Missouri, 321; New Jersey, 44; North Carolina, 196; Oklahoma, 16; Oregon, 11; Rhode Island, 16; South Carolina, 14; Texas, 3; Virginia, 154; and Washington, 3.

CYPRESS.

Practically all of the cypress lumber represented in Table 12 comes from the single species *Taxodium distichum*, but a little is probably obtained from pond cypress (*Taxodium imbricarium*), a small tree occurring in swamps in southern Georgia and elsewhere in the Gulf region. The common cypress is a deep-swamp tree and little is cut where the ground is not under water during a considerable part of the year. Some of the most extensive logging operations are carried on more on water than on land. The work is costly because of the extra work required to get the logs to the mills. The tree's range is indicated by the list of states which furnish the annual product as shown in the table.

Many of the cypress forests consist of old timber. Young stands are not abundant, and cypress, like hemlock, gives little promise of supplies after present sources have been exhausted. It is a tree of very slow growth, and mature timber is from 100 to 400 years old.

TABLE 12.—LUMBER, LATH, AND SHINGLES—**Cypress Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	CYPRESS LUMBER SAWED.			STATE.	CYPRESS LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	979	997,227	100.0	North Carolina	141	30,068	3.0
				South Carolina	46	26,338	2.6
Louisiana	113	653,727	65.6	Missouri	76	24,146	2.4
Florida	46	101,429	10.2	Mississippi	93	17,626	1.8
Georgia	47	62,941	6.3	Virginia	42	12,038	1.2
Arkansas	184	43,238	4.3	All other states [1]	191	25,676	2.6

[1] Includes establishments distributed as follows: Alabama, 19; Delaware, 1; Illinois, 38; Indiana, 1; Kentucky, 39; Maryland, 7; Oklahoma, 2; Tennessee, 75; and Texas, 9.

The largest returns for cypress lumber are from Louisiana, but six other states are credited with more than 20,000,000 feet each. Cypress mills are usually large, the average production of this lumber per mill in 1912 exceeding 1,000,000 feet, while in Louisiana the average was 5,785,000. The total production of cypress lumber was a little larger in 1912 than in the preceding year, but three states—Louisiana, Arkansas, and Mississippi—show decreases.

RED GUM.

The lumber for which statistics are presented in Table 13 is all sawed from a single species, the red gum or sweet gum (*Liquidambar styraciflua*). This lumber is important in the export trade. In foreign countries it is known as "satin walnut," "hazel," and "hazel pine," as well as by its true name. It is extensively used in the manufacture of furniture both in this country and in foreign countries, and is often finished to imitate more costly woods, such as oak, cherry, mahogany, and especially Circassian walnut, since lumber may be selected which has a natural figure closely resembling that of Circassian walnut. Difficulties in the seasoning of red gum formerly stood in the way of its wide utilization, but these have now been largely overcome.

The trade recognizes two classes of this lumber, "red gum" and "sap gum." Both are from the same tree, the red being the heartwood and the other the sapwood. Some large trunks are nearly all sapwood, while others contain an excess of heart. The lumber production is the largest drain upon this species, but it is not the only one. More veneer and cooperage stock is now made from red gum than from any other American wood.

TABLE 13.—LUMBER, LATH, AND SHINGLES—**Red Gum Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	RED GUM LUMBER SAWED.			STATE.	RED GUM LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	3,350	694,260	100.0	Kentucky..........	386	28,136	4.1
				Alabama..........	152	22,452	3.2
Arkansas..........	380	211,920	30.5	South Carolina.....	38	14,479	2.1
Mississippi..........	240	121,354	17.5	Indiana..........	290	14,201	2.0
Tennessee..........	422	69,612	10.0	Texas..........	44	13,281	1.9
Louisiana..........	78	63,573	9.2	Virginia..........	206	13,165	1.9
Missouri..........	162	54,564	7.9	Georgia..........	58	9,714	1.4
North Carolina.....	217	32,692	4.7	All other states[1]....	677	25,117	3.6

[1] Includes establishments distributed as follows: Delaware, 27; Florida, 3; Illinois, 137; Maryland, 94; New Jersey, 12; New York, 2; Ohio, 132; Oklahoma, 21; Pennsylvania, 134; and West Virginia, 115.

The number of mills reporting red gum has varied materially from year to year, being 3,716 in 1910, 2,843 in 1911, and 3,350 in 1912.

The output of lumber shows a similar variation, with no apparent tendency to permanent increase or decrease. The production in 1912 was 111,293,000 feet more than in 1911, but somewhat smaller than in 1909. Twenty-three states reported lumber of this species in 1912, the production being largest in Arkansas, Mississippi, and Tennessee, ranking in the order named. New York is the most northern state contributing to the supply, and is credited with 150,000 feet; Florida, the most southern state, reported 803,000 feet; and Oklahoma, the most western, 4,157,000 feet. Red gum is cut in every Atlantic Coast state south of New England and in every Gulf Coast state.

TULIP POPLAR.

This wood is known among lumbermen and manufacturers as "yellow poplar" or "whitewood," but the tree from which it is cut (*Liriodendron tulipifera*) is perhaps more frequently called the tulip tree. The term "tulip poplar" is used in this report rather than the term "yellow poplar" by way of recognition of the common name of the tree. Several species of the genus *Poplulus*, to which the cottonwoods and aspens belong, are commonly called poplars, but they are not closely related to the tulip poplar. The range of the tulip poplar is confined to the eastern half of the United States and a small area in southern Canada. It never grows in pure forests, but always mixed with other hardwoods, on rich, deep soil. In the regions where the tulip poplar is abundant lumbermen sometimes distinguish a variety with very thick sapwood and of rather tough texture, which is known as "white," "hickory," or "blue" poplar. Though woodsmen often assert that it is not the same as tulip or yellow poplar, botanists regard the two as the same species. The differences in the color and texture of the wood may be due to differences in soil or location.

TABLE 14.—LUMBER, LATH, AND SHINGLES—**Tulip Poplar Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	TULIP POPLAR LUMBER SAWED.			STATE.	TULIP POPLAR LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	6,786	623,289	100.0	Ohio..............	462	49,583	8.0
				Alabama...........	319	25,703	4.1
West Virginia......	575	118,982	19.1	Indiana...........	500	17,803	2.9
Tennessee..........	988	107,265	17.2	Georgia...........	289	16,736	2.7
Kentucky...........	918	91,225	14.6	Mississippi.........	184	15,757	2.5
Virginia............	851	76,709	12.3	Pennsylvania......	414	14,413	2.3
North Carolina.....	848	71,779	11.5	All other states[1]....	438	17,334	2.8

[1] Includes establishments distributed as follows: Arkansas, 27; Connecticut, 16; Delaware, 15; Florida. 5; Illinois, 74; Louisiana, 9; Maryland, 118; Missouri, 38; New Jersey, 28; and South Carolina, 108.

The maximum production of tulip poplar has evidently been passed and a decline which promises to be permanent has set in. Most of the regions where this timber was at its best have been cut over. West Virginia produced more tulip poplar lumber in 1912 than any other state, Tennessee, Kentucky, and Virginia following in the order named. Twenty-one states contributed to the supply, and production was reported in 1912 by 6,786 mills, as compared with 6,323 in 1911. The quantity reported per mill is small, but the mills which report poplar almost invariably saw other woods also.

CHESTNUT.

Only one species of chestnut (*Castanea dentata*) grows in this country. Two classes of chestnut lumber are named in commercial transactions, "sound-wormy" and that which has not been attacked by insects. In the wormy wood there are occasional holes, about the size of a knitting needle, caused by insects that work in the trunks of the living trees, perforating them from center to sapwood. The largest and oldest trees are most apt to be affected. In some instances there is evidence that successive generations of the boring insects continue to work in the same trunk two or three hundred years, nor do they always cease their activities until some time after the logs are converted into lumber. The perforations are not considered as defects in lumber intended for some purposes, though they mar it for finishing material. The chestnut blight, a disease affecting the bark of the tree, has killed much northern chestnut, and has caused uneasiness among owners of this timber farther south.

TABLE 15.—LUMBER, LATH, AND SHINGLES—**Chestnut Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	CHESTNUT LUMBER SAWED.			STATE.	CHESTNUT LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	5,949	554,230	100.0	Kentucky	535	26,624	4.8
				Massachusetts	226	23,762	4.3
West Virginia	574	123,825	22.3	Maryland	214	23,022	4.2
Pennsylvania	1,226	93,294	16.8	Ohio	383	18,236	3.3
Virginia	639	54,775	9.9	New York	627	17,158	3.1
Connecticut	209	54,463	9.8	New Jersey	88	8,921	1.6
North Carolina	397	50,033	9.0	Rhode Island	21	4,714	0.9
Tennessee	574	46,987	8.5	All other states [1]	236	8,416	1.5

[1] Includes establishments distributed as follows: Alabama, 28; Delaware, 12; Georgia, 35; Indiana, 61; New Hampshire, 84; South Carolina, 2; and Vermont, 14.

Chestnut comes from the central and eastern part of the hardwood region, West Virginia at present leading in its production, followed by Pennsylvania, these two states supplying 39.2 per cent of the total in 1912. Twenty states reported an output of chestnut in 1912, the most northern states being New Hampshire and Vermont, the most southern, Georgia and Alabama, and the most western, Indiana. The production in the country as a whole has varied but little for several years.

REDWOOD.

No table is necessary to give the production of redwood lumber, because practically the whole quantity is produced in California. Two species occur there, the redwood proper (*Sequoia sempervirens*), from which most of the redwood lumber of commerce is obtained, and the "big tree" (*Sequoia washingtoniana*), which is confined to a few groves on the western face of the Sierra Nevada Mountains. The common redwood grows near the coast, in the fog belt, from central California to Oregon. The trees are of great size, many exceeding 10 feet in diameter and 200 feet in height. The "big tree" redwoods are the largest trees in the world, though not the tallest. A few of the largest trunks have produced more than 100,000 feet of lumber. The exports of this wood are relatively large, though after supplying the demands for export and the markets on the Pacific coast, there is a surplus which reaches all of the largest markets in the central Mississippi Valley and in the Eastern states. The production of redwood lumber, which varies but little from year to year, was 496,796,000 feet in 1912, sawed by 42 mills.

BEECH.

Beech lumber is cut from a single species (*Fagus atropunicea*), not a group, as in the case of oak and maple. Thirty-one states, all east of the Rocky Mountains, produce beech lumber for the market, but the total output in 1912 was less than half a billion feet. No region has a monopoly of the timber, which is sawed in comparatively large quantities in widely separated parts of the country. Some users of the wood distinguish red and white beech, but these terms refer to the red heartwood and the white sapwood of the same tree. "Blue beech" and "water beech" are names applied to another tree, *Carpinus caroliniana*, which is not a beech, but belongs to the birch family, and is too small and unshapely to be valuable for lumber. Beech is meeting an increasing demand for furniture stock and for flooring.

The production of beech has been fairly constant for several years, Michigan ranking first among the states, Indiana second, and Pennsylvania third.

TABLE 16.—LUMBER, LATH, AND SHINGLES—**Beech Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	BEECH LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	5,750	435,250	100.0
Michigan	409	92,106	21.2
Indiana	750	70,166	16.1
Pennsylvania	622	49,686	11.4
Ohio	810	41,893	9.6
New York	745	40,761	9.4
West Virginia	332	40,143	9.2
Kentucky	620	39,051	9.0
Vermont	276	13,144	3.0
Tennessee	328	11,879	2.7
New Hampshire	137	8,986	2.1
Maine	174	7,264	1.7
All other states [1]	547	20,171	4.6

[1] Includes establishments distributed as follows: Alabama, 33; Arkansas, 3; Connecticut, 35; Delaware, 5; Georgia, 15; Illinois, 44; Iowa, 1; Louisiana, 2; Maryland, 43; Massachusetts, 90; Minnesota, 3; Mississippi, 11; Missouri, 14; New Jersey, 20; North Carolina, 44; Rhode Island, 2; South Carolina, 2; Texas, 1; Virginia, 111; and Wisconsin, 68.

LARCH.

Larch (*Larix occidentalis*) and tamarack (*Larix laricina*) have both been tabulated as larch in compiling the statistics of the present report. The former is a western species, the latter an eastern. The production credited to Montana, Idaho, Washington, and Oregon in Table 17, amounting to about two-thirds of the total, is larch; that from other states is tamarack. Both larch and tamarack are needle-leaf trees, which, like the southern cypress, shed their leaves annually. The larch at its best attains a size four or five times greater than the tamarack, and develops a tall, slender trunk, almost without limbs, except near the top. It is one of the most slow growing of the softwoods. The trunk produces a large percentage of clear lumber of excellent character, when it can be had free from shakes and seasoning defects, but much difficulty has been experienced in drying it. The tamarack is not considered to be first-class saw timber.

TABLE 17.—LUMBER, LATH, AND SHINGLES—**Larch Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	LARCH LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	1,041	407,064	100.0
Montana	49	120,779	29.7
Idaho	58	111,008	27.3
Minnesota	242	68,587	16.8
Wisconsin	293	32,408	8.0
Washington	52	29,884	7.3
Michigan	267	29,833	7.3
Oregon	17	13,420	3.3
All other states [1]	63	1,145	0.3

[1] Includes establishments distributed as follows: Indiana, 4; Iowa, 2; Maine, 24; Massachusetts, 4; New Hampshire, 8; New York, 5; Pennsylvania, 6; Vermont, 8; and Virginia, 2.

BIRCH.

Five or six species of birch contribute to the lumber supply, but two furnish most of the market supply. These are the sweet birch

(*Betula lenta*) and the yellow birch (*Betula lutea*). Yellow birch is the principal source of birch lumber in the Lake states, New York, and New England, while sweet birch is the lumber species in Pennsylvania and southward. The wood of the two species is so much alike that it is difficult to distinguish the finished lumber of one from that of the other. In the South some river birch (*Betula nigra*) reaches the sawmills, but the wood is plain and unattractive. Some paper birch (*Betula papyrifera*) is converted into lumber, especially in New England, but much larger quantities are sawed directly into bars for making spools and the great variety of other small turned articles known to the trade as "novelties." White birch (*Betula populifolia*), a similar but much less important species, is used for the same purposes. This species, as well as the paper birch, is commonly called white birch throughout New England; and in many localities no distinction is made between the two, though the lumber from the paper birch is of somewhat better quality than that from the white birch. A very small quantity of western birch (*Betula occidentalis*) is reported by the sawmills of Washington and California.

Few woods respond more readily than birch to the wood finisher's art, and its employment for interior finish and for furniture is increasing.

TABLE 18.—LUMBER, LATH, AND SHINGLES—**Birch Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	BIRCH LUMBER SAWED.			STATE.	BIRCH LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	3,626	388,272	100.0	West Virginia......	160	19,295	5.0
				New Hampshire...	199	18,132	4.7
Wisconsin..........	406	140,071	36.1	Pennsylvania......	427	17,666	4.5
Michigan...........	270	55,350	14.3	Minnesota..........	132	6,452	1.7
Maine..............	364	51,110	13.2	Massachusetts......	120	4,525	1.2
Vermont...........	376	31,551	8.1	North Carolina.....	55	2,993	0.8
New York..........	585	31,395	8.1	All other states[1] ...	532	9,732	2.5

[1] Includes establishments distributed as follows: Alabama, 1; Arkansas, 9; California, 1; Connecticut, 59; Georgia, 4; Illinois, 46; Indiana, 36; Iowa, 33; Kentucky, 60; Maryland, 24; Mississippi, 1; Missouri, 102; New Jersey, 12; Ohio, 36; Oklahoma, 5; Rhode Island, 4; South Carolina, 2; Tennessee, 42; Virginia, 54; and Washington, 1.

Thirty-one states reported birch lumber in 1912. Half of the total output was reported by Michigan and Wisconsin, and nearly 30 per cent by Maine, Vermont, and New York. The relative positions of these states in the production of this lumber has not changed materially in the past few years, nor has the total annual output, which was 420,769,000 feet in 1910, 432,571,000 in 1911, and 388,272,000 in 1912.

CEDAR.

With the exception of the oaks, the cedars are the most diversified group of timber trees listed in the reports of the sawmill industry in this country. The wood classed commercially as cedar is cut from at least four genera and more than a dozen species, but the bulk of the product comes from four or five species. The most important is the western red cedar (*Thuja plicata*), sometimes called shingle cedar, because it is extensively used in the manufacture of shingles. It ranges from Idaho to the Pacific Ocean, Washington ranking first in its production, Idaho next, and Oregon third. The cedar lumber reported from those states is not wholly of this species, however, as three other important cedars are cut for lumber in that region. Yellow cedar (*Chamaecyparis nootkatensis*) grows near the coast in Washington and Oregon, and though the quantity cut is not large, it is a fine wood, taking its name from its rich yellow color. Port Orford cedar (*Chamaecyparis lawsoniana*) occurs on the coast of southern Oregon and northern California, where large, symmetrical trees grow in dense stands, and the lumber is well known in western markets. A fourth tree of the Pacific region is the incense cedar (*Libocedrus decurrens*) of the Sierra Nevada Mountains of California and of southern Oregon. Several obscure species of the genus *Juniperus* occur in the far West, and probably small quantities find their way to market as lumber.

The most important of the eastern cedars represented in the lumber statistics is the red cedar (*Juniperus virginiana*), often called pencil cedar, because of its importance in the manufacture of pencils. The largest output of this species is credited to Tennessee, and the next to Virginia, while every Southern state is a contributor. It ranges from Maine to Dakota and southward to Texas and Florida. West of this area lie the ranges of several junipers very similar to the red cedar, and their unshapely trunks furnish a small—almost negligible—quantity of lumber; but some of the wood is beautiful in color and texture. Among these trees are the western juniper (*Juniperus occidentalis*), the Rocky Mountain juniper (*Juniperus scopulorum*), the one-seed juniper (*Juniperus monosperma*), the mountain juniper (*Juniperus sabinoides*), the Utah juniper (*Juniperus utahensis*), and the alligator juniper (*Juniperus pachyphloea*). In the eastern Gulf region the southern red cedar (*Juniperus barbadensis*) is a small source of supply. The wood is usually considered equal to that of the red or pencil cedar.

Two other important cedars figure in the supply, the northern white cedar (*Thuja occidentalis*) and the southern white cedar (*Chamaecyparis thyoides*). The former occurs from Maine to Minnesota, but is not commercially valuable very far south of the northern tier of states. It is frequently called "Arborvitæ," but among lumbermen the common name is simply "White cedar." The southern white cedar is a swamp tree, which is found along the coast between New Jersey and South Carolina. The stands are very dense, but the total area occupied by this cedar is not large.

TABLE 19.—LUMBER, LATH, AND SHINGLES—**Cedar Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	CEDAR LUMBER SAWED.			STATE.	CEDAR LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	982	329,000	100.0	Michigan...........	73	15,390	4.7
				Alabama............	27	5,235	1.6
Washington........	115	153,518	46.7	Maine..............	50	4,682	1.4
Idaho..............	24	35,165	10.7	Missouri............	5	4,285	1.3
Tennessee..........	120	31,296	9.5	North Carolina.....	73	3,970	1.2
Oregon.............	68	20,654	6.3	Wisconsin..........	62	3,887	1.2
California..........	39	18,507	5.6	All other states [1]...	265	14,128	4.3
Virginia............	61	18,283	5.6				

[1] Includes establishments distributed as follows: Arkansas, 9; Connecticut, 18; Delaware, 10; Florida, 4; Georgia, 10; Indiana, 7; Kentucky, 35; Maryland, 15; Massachusetts, 20; Minnesota, 29; Mississippi, 3; Montana, 4; Nevada, 1; New Hampshire, 3; New Jersey, 42; New York, 8; Ohio, 3; Pennsylvania, 11; South Carolina, 9; Texas, 1; Vermont, 17; West Virginia, 5; and Wyoming, 1.

The production of cedar lumber in the United States in 1912 was somewhat below that of the three preceding years, but a permanent decline can not be predicted for the near future. There will probably be a falling off in the East, but the western forests contain enough timber to supply an increased demand for a long term of years.

Cedar lumber was reported in 1912 by 982 mills, located in 35 states, the average production per mill being 335,000 feet. The mills of Idaho show the highest individual average, 1,465,000 feet each, followed by those of Washington with 1,335,000 feet.

BASSWOOD.

Three species of basswood contribute to the production of lumber represented in Table 20. The tree known to botanists as *Tilia americana* furnishes the largest quantities of lumber; this species is most abundant in the Lake states, but is found southward to Georgia and Texas and eastward to Maine. Downy basswood (*Tilia pubescens*) is less abundant, but has an extensive range from Florida to North Carolina and west to Texas. White basswood (*Tilia heterophylla*) is fairly abundant in the southern Appalachian region, and most of the basswood credited to West Virginia is of this species. Lumbermen seldom make any distinction between the different species, and when two or all three are cut in the same locality, woodsmen often fail to observe that all are not the same. The wood is soft and white. "Whitewood" is a well-established name for it, but this name is also applied to yellow poplar, while in European markets the term "whitewood" is applied to a group of woods of light color, but of no species in particular—aspen, basswood, occasionally birch and maple, magnolia, yellow poplar, and others.

TABLE 20.—LUMBER, LATH, AND SHINGLES—**Basswood Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	BASSWOOD LUMBER SAWED.			STATE.	BASSWOOD LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	5,217	296,717	100.0	Tennessee	146	9,460	3.2
				Virginia	107	9,343	3.1
Wisconsin	572	79,389	26.8	North Carolina	153	8,128	2.7
Michigan	486	53,533	18.0	Vermont	279	7,957	2.7
West Virginia	326	32,986	11.1	Indiana	250	7,389	2.5
New York	1,025	28,513	9.6	Kentucky	152	6,986	2.4
Ohio	460	14,920	5.0	Maine	154	5,499	1.9
Minnesota	251	13,713	4.6	All other states[1]	426	7,976	2.7
Pennsylvania	430	10,925	3.7				

[1] Includes establishments distributed as follows: Alabama, 19; Arkansas, 9; Connecticut, 36; Georgia, 6; Illinois, 17; Iowa, 109; Kansas, 3; Louisiana, 1; Maryland, 17; Massachusetts, 52; Mississippi, 2; Missouri, 64; New-Hampshire, 83; New Jersey, 5; Oklahoma, 2: and South Carolina, 1.

Thirty states are listed as producing basswood lumber in commercial quantities, but more than half of the total production in 1912 came from Wisconsin, Michigan, and West Virginia. The growth is scattered, as is apparent from the fact that 5,217 mills, ranging from Maine to Minnesota and southward to Louisiana, reported a combined output of less than 300,000,000 feet. The output during the past five years has not varied greatly.

HICKORY.

Hickory is an American wood of peculiarly valuable properties, and no satisfactory substitute for it has been found in any country. Ten or more species are grouped under the common name "hickory," usually without distinction after the logs reach the sawmills. The pecan is a hickory, botanically, and the largest tree of the group, but its wood is inferior to all the others. The most abundant species are shagbark (*Hicoria ovata*), shellbark (*Hicoria laciniosa*), pignut (*Hicoria glabra*), bitternut (*Hicoria minima*), and mockernut (*Hicoria alba*).

A large portion of the hickory cut each year does not pass through sawmills, and consequently does not appear in Table 21. It consists of split stock and small square sawed stock for handle factories and spoke mills and the cordwood that is sold in fuel markets and to packing houses and others for smoking meat. It is probable that little more than half of the actual cut of hickory for all purposes is shown in the accompanying table.

The trees do not occur in pure stands like pine, chestnut, cypress, and others, but are scattered through forests of other hardwoods.

This has a tendency to protect hickory against complete exhaustion over extensive areas, such as has frequently taken place with pine.

TABLE 21.—LUMBER, LATH, AND SHINGLES—**Hickory Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	HICKORY LUMBER SAWED.			STATE.	HICKORY LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	5,979	278,757	100.0	Louisiana........	34	12,030	4.3
				Mississippi.........	96	11,758	4.2
Arkansas..........	242	56,757	20.4	Pennsylvania......	607	9,826	3.5
Tennessee..........	557	42,048	15.1	North Carolina.....	221	9,616	3.4
Kentucky..........	499	30,748	11.0	Illinois.............	254	9,579	3.4
Ohio...............	789	20,727	7.4	Alabama...........	121	6,697	2.4
Indiana............	642	19,039	6.8	Virginia............	222	4,830	1.7
West Virginia......	357	15,529	5.6	All other states [1]...	911	15,513	5.6
Missouri...........	427	14,060	5.0				

[1] Includes establishments distributed as follows: Connecticut, 95; Delaware, 10; Florida, 5; Georgia, 76; Iowa, 64; Kansas, 7; Maryland, 88; Massachusetts, 44; Michigan, 113; Minnesota, 5; New Hampshire, 5; New Jersey, 44; New York, 213; Oklahoma, 58; Rhode Island, 7; South Carolina, 32; Texas, 18; Vermont, 4; and Wisconsin, 23.

Thirty-three states produced hickory lumber in 1912, the largest quantity coming from Arkansas. Nearly every state in the eastern half of the United States sends hickory to its sawmills, but by far the greater part of the total output is reported by states west of the Appalachian Mountains. The principal source of supply is the region comprising Ohio, Indiana, Kentucky, Tennessee, and Arkansas.

ELM.

Elm lumber is cut from at least five species. White elm (*Ulmus americana*), commonly called gray elm in the Lake states, is the most abundant and is distributed more widely than any of the others. It is found in most regions east of the eastern base of the Rocky Mountains. Rock or cork elm (*Ulmus racemosa*) is the most abundant in the Lake states. It is regarded as the toughest of the elms. Slippery or red elm (*Ulmus pubescens*) is of wide distribution, but not abundant. Winged elm (*Ulmus alata*) and cedar elm (*Ulmus crassifolia*) are southern trees of comparatively small importance as sources of lumber.

Cork or rock elm is often separated at the mills from the others, but aside from that all elms go to market together and the relative output of the several species is not known. There can be little doubt, however, that 90 per cent of all the elm lumber sawed in the United States is white elm. It is not only much more abundant than all other elms together, but the average size of the trees much surpasses any of the others.

Every state east of the Mississippi River except Delaware is credited in Table 22 with an output of elm lumber; and nine states west of the Mississippi are sources of supply. The three states of Michigan, Wisconsin, and Ohio produced more than half of the total in 1912. The output in recent years has not shown much increase or decrease, though the variation from year to year has been considerable. The output was greater in 1899 than it is at present.

TABLE 22.—LUMBER, LATH, AND SHINGLES—**Elm Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	ELM LUMBER SAWED.			STATE.	ELM LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	5,573	262,141	100.0	Minnesota..........	222	12,245	4.7
				Illinois.............	284	6,874	2.6
Michigan...........	488	52,757	20.1	Tennessee..........	268	6,176	2.4
Wisconsin..........	502	50,608	19.3	Mississippi.........	64	5,759	2.2
Ohio................	703	28,968	11.1	Iowa................	131	4,981	1.9
Indiana............	597	27,463	10.5	Kentucky..........	252	3,797	1.4
Missouri...........	462	22,279	8.5	Pennsylvania......	233	2,994	1.1
New York.........	684	13,684	5.2	All other states [1]....	564	10,384	4.0
Arkansas...........	119	13,172	5.0				

[1] Includes establishments distributed as follows: Alabama, 27; Connecticut, 33; Florida, 1; Georgia, 20; Kansas, 8; Louisiana, 24; Maine, 60; Maryland, 15; Massachusetts, 40; Nebraska, 1; New Hampshire, 39; New Jersey, 16; North Carolina, 9; Oklahoma, 60; Rhode Island, 1; South Carolina, 5; Texas, 23; Vermont, 130; Virginia, 16, and West Virginia, 36.

ASH.

Fourteen species of ash are found in the United States, and about half of them possess commercial value and figure in the country's lumber production, though it is not possible to state what proportion of the total output of ash lumber is contributed by any one species. It is known, however, that the white ash (*Fraxinus americana*) is more abundant than any other. It is cut mostly in the Central states. Black ash (*Fraxinus nigra*) is the source of ash lumber in the Lake states, while green ash (*Fraxinus lanceolata*) is the most important as a source of lumber in the Southern states. The lumber credited to California, Oregon, and Washington is Oregon ash (*Fraxinus oregona*).

Ash lumber was reported in 1912 by 6,491 mills, located in 37 states. No one region has a monopoly of the production of this lumber. Ohio is the leading state, and Arkansas the second in importance, while Louisiana and New York are both large producers.

TABLE 23.—LUMBER, LATH, AND SHINGLES—**Ash Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	ASH LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	6,491	234,548	100.0
Ohio	720	26,100	11.1
Arkansas	157	23,681	10.1
Indiana	516	21,549	9.2
Tennessee	366	18,434	7.9
Wisconsin	344	14,699	6.3
Louisiana	50	14,395	6.1
Michigan	412	14,280	6.1
New York	690	10,706	4.6
Pennsylvania	606	10,336	4.4
Kentucky	412	9,588	4.1
Mississippi	104	9,051	3.9
West Virginia	224	8,110	3.5
Oklahoma	64	7,201	3.1
Missouri	238	6,298	2.7
North Carolina	163	5,473	2.3
All other states [1]	1,425	34,647	14.8

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[1] Includes establishments distributed as follows: Alabama, 62; California, 1; Connecticut, 97; Delaware, 1; Florida, 6; Georgia, 57; Illinois, 152; Iowa, 74; Kansas, 4; Maine, 132; Maryland, 35; Massachusetts, 112; Minnesota, 140; New Hampshire, 106; New Jersey, 19; Oregon, 9; Rhode Island, 10; South Carolina, 20; Texas, 26; Vermont, 238; Virginia, 122; and Washington, 2.

COTTONWOOD.

Forty-three states reported a production of lumber from the species combined in this report under the name of "cottonwood." The remaining five which report no production of this wood are Arizona, Delaware, New Mexico, Nevada, and North Dakota. The species tabulated for this report as cottonwood all belong to the genus *Populus*, which forms a part of the willow family (*Salicaceæ*), but they have many local names, such as aspen, balm of Gilead, cottonwood, and poplar. The common cottonwood (*Populus deltoides*) is the most abundant, and supplies the bulk of the cottonwood lumber. It ranges from New England to Montana, and southward to Florida and New Mexico. It is the tree which most people have in mind when they speak of cottonwood without a qualifying term, but it is frequently impossible to say what particular species is meant when cottonwood is reported. In the lower Mississippi Valley a considerable quantity of swamp cottonwood (*Populus heterophylla*) goes to sawmills. On the Pacific coast black cottonwood (*Populus trichocarpa*), the largest of all the cottonwoods, is cut for lumber; Fremont cottonwood (*Populus fremontii*) and two or three other species are likewise used in the region from western Texas to southern California; and in the northern part of the United States, particularly from Minnesota eastward, the aspen (*Populus tremuloides*), the large-toothed aspen (*Populus grandidentata*), and the balm of Gilead (*Populus balsamifera*) are converted into lumber. The last named is often kept separate under its own name, or under the abbreviated name of "balm." Half a dozen other species of cottonwood are scattered sparingly in various regions, two or more being foreign trees which were long ago introduced into this country and have run wild. White poplar (*Populus alba*) and black poplar (*Populus nigra*) are naturalized trees which are occasionally cut for lumber.

The output of cottonwood lumber now remains fairly constant from year to year, but it had declined in 1912 to a little more than half of what it was in 1899. Many districts in the South and in the central Mississippi Valley were stripped of their best cottonwood timber years ago to supply the export trade. Winds carry the light seeds of these trees long distances and plant them in damp situations where they are not likely to be interfered with, and to this fact is due the wide dispersion of cottonwood.

TABLE 24.—LUMBER, LATH, AND SHINGLES—**Cottonwood Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	COTTONWOOD LUMBER SAWED.			STATE.	COTTONWOOD LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	2,095	227,477	100.0	Iowa	128	5,786	2.5
				Minnesota	109	5,208	2.3
Mississippi	70	59,228	26.0	Texas	16	4,696	2.1
Arkansas	93	58,931	25.9	Michigan	126	4,142	1.8
Louisiana	36	36,721	16.1	Indiana	206	3,110	1.4
Missouri	262	11,967	5.3	Illinois	122	2,522	1.1
Tennessee	55	8,953	3.9	All other states [1]	872	26,213	11.5

[1] Includes establishments distributed as follows: Alabama, 16; California, 1; Colorado, 3; Connecticut, 9; Florida, 2; Georgia, 7; Idaho, 6; Kansas, 7; Kentucky, 59; Maine, 58; Maryland, 6; Massachusetts, 38; Montana, 8; Nebraska, 2; New Hampshire, 22; New Jersey, 1; New York, 182; North Carolina, 1; Ohio, 160; Oklahoma, 56; Oregon, 6; Pennsylvania, 10; Rhode Island, 1; South Carolina, 6; South Dakota, 3; Utah, 9; Vermont, 88; Virginia, 7; Washington, 10; West Virginia, 6; Wisconsin, 81; and Wyoming, 1.

More than half of the total production of cottonwood lumber comes from Mississippi and Arkansas, while Louisiana ranks third in production. A rather large quantity of black willow (*Salix nigra*) is cut in those states and this is often reported as cottonwood by the mills which saw it.

SUGAR PINE.

The sugar pine (*Pinus lambertiana*), which is a white pine, is the largest pine of America. The whole supply of lumber from this species comes from California and Oregon, by far the greater part from the former state. The output is increasing yearly but not rapidly. The forests extend 600 or 700 miles along the Sierra Nevada Mountains in California and also cover a considerable area in southern Oregon. The average output of the sugar pine mills in California in 1912 was 2,140,000 feet, and in Oregon, 289,000 feet. This tree has such marked distinguishing characteristics that the lumber is seldom mixed with any other at the mill, and is not often confused with any other in the markets. It is being substituted for white pine in many markets east of the Rocky Mountains, but the amount so used is far short of the quantity of white pine still sold there.

TABLE 25.—LUMBER, LATH, AND SHINGLES—**Sugar Pine Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	SUGAR PINE LUMBER SAWED.		
	Number of active mills reporting.	Qauntity (M feet b. m.).	Per cent distribution.
United States	74	132,416	100.0
California	60	128,376	96.9
Oregon	14	4,040	3.1

WHITE FIR.

The lumber represented by the figures in Table 26 is cut from several species. It may be said to include in a general way all the fir lumber of the western part of the United States, other than Douglas fir. This is not strictly true in all cases, but at least three or four out of nine species of western fir contribute to the supply which appears in statistics as white fir. The true white fir is *Abies concolor*. Other species reported by sawmills under the same name are grand fir (*Abies grandis*), lovely fir (*Abies amabilis*), which lumbermen sometimes sell as larch instead of white fir, noble fir (*Abies nobilis*), which likewise is occasionally sold as larch, and red fir (*Abies magnifica*). Scarcity of white fir is not imminent. The timber is scattered over an area of nearly a million square miles, being in some parts plentiful, in others scarce. The largest and best timber is in the Pacific Coast states.

TABLE 26.—LUMBER, LATH, AND SHINGLES—**White Fir Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	WHITE FIR LUMBER SAWED.			STATE.	WHITE FIR LUMBER SAWED.		
	Number of active mils. reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills. reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	214	122,613	100.0	Idaho	42	15,421	12.6
				Washington	36	12,919	10.5
California	54	68,324	55.7	All other states[1]	27	5,284	4.3
Oregon	55	20,665	16.9				

[1] Includes establishments distributed as follows: Colorado, 6; Montana, 9; Nevada, 1; New Mexico, 2; Utah, 7; and Wyoming, 2.

More than half of the whole production of white fir lumber in 1912 was reported by California, and Oregon was the second largest producer. Eight other states, however, had from 1 to 42 mills engaged in sawing white fir lumber. Colorado and Wyoming on the east, New Mexico on the south, Washington, Idaho, and Montana on the north, and the Pacific Coast states on the west limit the range of the various species which furnish the white fir lumber of commerce.

The output for the past few years has shown a tendency to increase, though the production in 1912 was slightly below that of 1911, and there was also a small decrease in the number of mills reporting.

TUPELO.

Four species are included under the name "tupelo" in Table 27, but the most important in quantity of product is *Nyssa aquatica*, sometimes known as "cotton gum" or "bay poplar," but commonly called "tupelo." This species is a swamp tree, the companion of cypress in many parts of the South. Two others, water gum (*Nyssa biflora*) and sour tupelo (*Nyssa ogeche*), are cut for lumber only in small amounts. The fourth tree of the group is the black gum (*Nyssa sylvatica*), which grows farther north than the others, and in quantity of annual production ranks next to the species first named. Its range extends from Maine to Florida and west to Michigan, Missouri, and Texas. It covers more territory than the three other species together—that is, it is found throughout the ranges of all three and extends beyond them north and northwest. Seasoning difficulties once greatly hindered the use of this wood, but processes have been discovered which have overcome this trouble.

TABLE 27.—LUMBER, LATH, AND SHINGLES—**Tupelo Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	TUPELO LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	410	122,545	100.0
Louisiana	45	54,581	44.5
North Carolina	33	16,514	13.5
Alabama	24	12,748	10.4
Virginia	19	7,246	5.9
Arkansas	40	6,221	5.1
Mississippi	30	5,327	4.3
Tennessee	36	5,012	4.1
Missouri	50	4,602	3.8
Illinois	26	4,337	3.5
All other states[1]	107	5,957	4.9

[1] Includes establishments distributed as follows: Connecticut, 4; Delaware, 1; Florida, 7; Georgia, 5; Indiana, 25; Kentucky, 22; Maryland, 1; Michigan, 4; Ohio, 11; Pennsylvania, 7; South Carolina, 7; Texas, 4; and West Virginia, 9.

Louisiana is the most important state in the production of tupelo lumber. Twenty-two states contributed in 1912, but the South furnished more than 90 per cent of the total. Tupelo was first reported separately in the lumber statistics for 1906, prior to which time it was considered as a minor species. When it was first put on the market it was usually bought and sold as "bay poplar," and some supposed it to be a variety of tulip or yellow poplar. The production has increased from about 50,000,000 feet in 1906 to 122,545,000 in 1912.

BALSAM FIR.

The lumber represented by the figures in Table 28 is nearly all of the single species *Abies balsamea*, but a small quantity comes from the

Fraser fir (*Abies fraseri*), which is a scarce tree occurring among the mountains from West Virginia to North Carolina.

Table 28.—Lumber, Lath, and Shingles—**Balsam Fir Lumber**—Number of Active Mills Reporting and Quantity Sawed, by States: 1912.

STATE.	BALSAM FIR LUMBER SAWED.			STATE.	BALSAM FIR LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	764	84,261	100.0	Michigan	74	5,899	7.0
Maine	309	46,963	55.7	New Hampshire	65	3,831	4.5
Minnesota	113	12,507	14.8	Wisconsin	55	3,817	4.5
Vermont	129	10,520	12.5	All other states [1]	19	724	0.9

[1] Includes establishments distributed as follows: Massachusetts, 10; New York, 5; North Carolina, 2; Pennsylvania, 1; and Virginia, 1.

The largest output of balsam fir yet recorded was that of 1909, when 1,415 mills sawed 108,702,000 feet. In 1912 a production of 84,261,000 feet was reported by 764 mills. Maine led, with more than half of the total, in 1912, and Minnesota was second. Eleven states are represented in the statistics, the most southern being North Carolina, where only two mills reported fir, all of which may have been Fraser fir.

SYCAMORE.

A single species (*Platanus occidentalis*) furnishes all the sycamore lumber shown in Table 29. Two western species, which are found in California and Arizona, are of small commercial importance because they are not abundant and the trunks are of poor form. Sycamore was cut in 28 states in 1912, though the total production has not reached 50,000,000 feet a year since 1909. Like all timbers which are so widely dispersed, the production is fairly constant from year to year. The tree's preferred habitat is on the banks of rivers and smaller streams, on land not usually wanted for agriculture. It is even more of a waste-ground tree than cottonwood, which it resembles in choice of location and habits of growth. It is one of the few trees which pass their prime long before they attain their greatest size, and sycamores that are not cut while comparatively young are apt to become worthless for lumber on account of hollow trunks. This fact has had, and will continue to have, its influence on the sycamore lumber supply.

The production of sycamore lumber is well distributed, and no very large proportion of the total comes from any one region. Missouri led in production in 1912, followed by Indiana and Arkansas. Oklahoma, Kansas, and Iowa mark the western limit of commercial range, New Hampshire the northern; and Texas, Louisiana, and

Florida the southern. The Ohio and middle Mississippi Valleys constituted the region of greatest development of the species in the original forests of this country, and there the bulk of the commercial supply is still found.

TABLE 29.—LUMBER, LATH, AND SHINGLES—**Sycamore Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	SYCAMORE LUMBER SAWED.			STATE.	SYCAMORE LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.)	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	2,211	49,468	100.0	Kentucky..........	303	4,837	9.8
				Illinois..............	209	3,249	6.6
Missouri............	415	8,223	16.6	Ohio................	274	3,104	6.3
Indiana.............	383	7,850	15.9	Oklahoma..........	60	2,043	4.1
Arkansas...........	62	7,538	15.2	West Virginia......	68	1,155	2.3
Tennessee..........	142	6,956	14.1	All other states [1]...	295	4,513	9.1

[1] Includes establishments distributed as follows: Alabama, 18; Connecticut, 7; Florida, 1; Georgia, 13; Iowa, 23; Kansas, 3; Louisiana, 6; Maryland, 26; Massachusetts, 1; Michigan, 50; Mississippi, 15; New Hampshire, 2; New Jersey, 2; New York, 1; North Carolina, 18; Pennsylvania, 42; South Carolina, 3; Texas, 5; and Virginia, 59.

WALNUT.

Thirty-three states furnished 43,083,000 feet of walnut lumber in 1912.

Walnut was in great demand 30 or 40 years ago and many districts with good transportation facilities were depleted at that time. The tree grows rapidly, and since it is found throughout a region so large it is not improbable that the annual growth of black walnut now nearly equals the annual cut for lumber.

TABLE 30.—LUMBER, LATH, AND SHINGLES—**Walnut Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	WALNUT LUMBER SAWED.			STATE.	WALNUT LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States..	2,738	43,083	100.0	Missouri............	322	4,635	10.8
				Tennessee..........	286	3,736	8.7
Ohio................	346	8,565	19.9	Pennsylvania......	204	2,268	5.3
Indiana.............	413	6,425	14.9	West Virginia......	175	1,597	3.7
Kentucky..........	320	5,855	13.6	Virginia............	166	1,123	2.6
Illinois..............	87	5,197	12.1	All other states [1]...	419	3,682	8.5

[1] Includes establishments distributed as follows: Alabama, 23; Arkansas, 31; Connecticut, 8; Florida, 1; Georgia, 16; Iowa, 72; Kansas, 5; Louisiana, 1; Maryland, 38; Massachusetts, 22; Michigan, 36; Minnesota, 5; Mississippi, 5; Nebraska, 1; New Hampshire, 1; New Jersey, 12; New York, 6; North Carolina, 65; Oklahoma, 40; Rhode Island, 1; South Carolina, 10; Texas, 2; Vermont, 4; and Wisconsin, 14.

The production of walnut was less in 1912 than in 1909, but was greater in 1912 than in either of the two preceding years. It has remained remarkably constant for 15 years, and for many years Ohio and Indiana have led all other states in the quantity produced. The quantity made into lumber is not the whole production of the forests, since large numbers of round or hewed logs are exported.

LODGEPOLE PINE.

Lodgepole pine (*Pinus contorta*) is most abundant on western mountains where dense stands occupy areas which were once bared by fire. The tree is tall and slender and grows very slowly. A century or more is required to produce a trunk large enough for small saw logs. For that reason no great dependence is placed in the lodgepole pine as a source of future lumber, though extensive regions are covered with young trees. The trunks are fit for mine props before they are large enough for saw timber.

TABLE 31.—LUMBER, LATH, AND SHINGLES—**Lodgepole Pine Lumber**—NUMBER OF ACTIVE MILLS REPORTING AND QUANTITY SAWED, BY STATES: 1912.

STATE.	LODGEPOLE PINE LUMBER SAWED.			STATE.	LODGEPOLE PINE LUMBER SAWED.		
	Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.		Number of active mills reporting.	Quantity (M feet b. m.).	Per cent distribution.
United States	103	22,039	100.0	Wyoming	23	7,010	31.8
				Montana	22	1,959	8.9
Colorado	38	11,697	53.1	All other states[1]	20	1,373	6.2

[1] Includes establishments distributed as follows: Idaho, 12; Oregon, 2; and Utah, 6.

Lodgepole pine was not reported separately prior to 1909. In that year 96 mills sawed 23,733,000 feet. The next year the production was 26,634,000 feet, reported by 118 mills; in 1911 it was 33,014,000 feet, reported by 109 mills; and in 1912 the output reported by 103 mills was 22,039,000 feet. Six states reported this lumber in 1912, but more than half the total output is credited to Colorado.

MINOR SPECIES.

Statistics of the production of lumber from minor species are given in Table 32.

Mahogany appears in larger quantity than any other of the minor species, and the production in 1912 was larger than in any recent year, being more than twice the amount reported in 1909. A number of species are grouped under "mahogany" as a trade rather than a botanical name. True mahogany (*Swietenia mahagoni*) is a tropical American tree, but occurs also in a very limited quantity in Florida. By far the greater part of the mahogany lumber is sawed from imported logs, much of the commercial mahogany being now supplied by Africa. The African resembles the American wood, but is of a different botanical species (*Khaya senegalensis*).

Cherry (*Prunus serotina*) was formerly tabulated separately, but is now grouped with the minor species. The region from western New

York southward through Pennsylvania, West Virginia, and into the states of the upper Ohio valley has been the chief source of cherry lumber for more than half a century. Several species of cherry are found in the United States, but only one is valuable as lumber.

Buckeye probably does not receive full justice in the figures representing it in Table 32. It is not a wood of great importance, but a custom prevails among many mills of selling the lumber as the sapwood of yellow or tulip poplar. It passes for "poplar saps" without the purchasers being any the wiser. Three or four species of buckeye go to the sawmills, but the yellow buckeye (*Aesculus octandra*) is the most important and attains the largest size. Few woods show as little figure as buckeye.

Locust (*Robinia pseudacacia*) is frequently marketed in forms other than sawed lumber, so that the lumber represented in the table does not constitute the total output of this valuable wood during the year 1912. Much is turned for buggy hubs and split into tree nails or large pins. In both cases the logs are converted into finished products without going to a sawmill.

Willow lumber is sawed principally from the black willow (*Salix nigra*), though small quantities come from the planted foreign species, white willow (*Salix alba*), and weeping willow (*Salix babylonica*). In some of the Southern states willow lumber is marketed as cottonwood, particularly when box factories are the purchasers.

Dogwood (*Cornus florida*) is credited in the table with 2,584,000 feet, but those figures fall much short of the whole output of dogwood in the United States, as this wood, like locust, is largely marketed in forms other than sawed lumber. Tennessee alone produces nearly one-half of the quantity shown in the table. Considerable quantities of this wood are made directly into shuttle blocks, and do not go to the sawmills.

Persimmon (*Diospyros virginiana*) passes through practically the same process as dogwood and is converted into the same product, shuttle blocks, without passing through sawmills. In many instances the logs go directly to the factories wishing to use the shuttles, particularly if the stock is for the foreign markets.

Japanese oak (*Quercus dentata*), sometimes known as Siberian oak, is shipped from Asia to the Pacific Coast states in the log and is converted into lumber after it reaches this country. This wood was first reported in the lumber statistics of 1911.

Cucumber (*Magnolia acuminata*) heart lumber bears some resemblance to yellow or tulip poplar, but it is scarce and it has never occupied other than a minor place in lumber output, nor is there any probability that it ever will.

The apple wood reported is wholly from planted trees.

Bois d'arc, or osage orange, has been widely planted as hedges, and the older plantings are large enough for poles, but the best logs are cut in the original forests in Oklahoma and Texas and are sawed into stock for wagons. The amount credited to this wood in the table is only a small part of the total production.

Eucalyptus lumber is cut in small quantities in California from planted trees. A number of species, all brought from Australia, are growing in that state. The most abundant, though probably not the most valuable for lumber, is the blue gum species (*Eucalyptus globulus*).

Hackberry is widely distributed over the United States, but is not abundant. The small quantity shown in the table does not represent the total production, as this lumber is often sold as ash.

Holly lumber is cut from several species, but the total production is small. The principal species cut is white holly (*Ilex opaca*).

Jenisero (*Tabebuia-downellsmithii*) is often called prima vera or white mahogany. It is a tree of Southern Mexico.

The laurel listed is probably *Kalmia latifolia*, which is the wood used in making pipes. North Carolina is the chief region of supply.

Magnolia is a name that might be applied to different woods, but the lumber represented in the table was probably *Magnolia foetida*, a large, beautiful, evergreen southern tree, the best wood of which might pass for yellow poplar.

Mulberry lumber is cut from the native wild red species (*Morus rubra*).

Padouk (*Pterocarpus indicus*), often called vermilion, is a richly colored wood from southeastern Asia.

Palmetto is a palm which flourishes in the Southern states, particularly from North Carolina to southern Florida.

Rosewood is a general name applied to a number of tropical woods.

Sassafras is widely distributed, but is at its best in the Ohio valley. The lumber often passes for ash, and probably the table does not give the wood as prominent a place as it deserves.

TABLE 32.—LUMBER, LATH, AND SHINGLES—**Minor Species of Lumber**—QUANTITY OF PRODUCT AND PRINCIPAL STATES REPORTING: 1912.

KIND.	Quantity sawed (M feet b. m.).	Principal states reporting.
Total	82,145	
Mahogany	29,209	Kentucky, Louisiana, Illinois, and Massachusetts.
Cherry	22,245	West Virginia, Pennsylvania, New York, and Ohio.
Buckeye	13,742	Tennessee, West Virginia, North Carolina, and Kentucky.
Locust	5,058	Virginia and Pennsylvania.
Willow	2,961	Mississippi.
Dogwood	2,584	Tennessee and Georgia.
Persimmon	1,577	Tennessee and Arkansas.
Japanese oak	1,250	California.
Cucumber	1,031	West Virginia.
All other kinds [1]	2,488	California, Tennessee, and Texas.

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[1] Includes apple, bois d'arc, butternut, eucalyptus, hackberry, holly, jenisero, laurel, magnolia, mulberry, padouk, palmetto, rosewood, sassafras, silverbell, shittim, and yew.

Silverbell (*Mohrodendron carolinum*) is cut in eastern Tennessee and western North Carolina in small quantities. Some of it has an elaborate bird's-eye figure, but the color is often unsatisfactory.

Yew (*Taxus brevifolia*) is a Pacific Coast wood, usually of rather poor form for sawlogs, but valuable for archery bows and other small wares.

LEADING STATES AND SPECIES.

The following tabular statement shows, for 1912, the states which ranked first in the production of lumber from one or more of the principal woods.

A state may supply more of two, three, or even a larger number of woods than any other state, and these may change from year to year. In 1911, for example, Arkansas ranked first in the production of lumber from three woods—red gum, hickory, and cottonwood—but in 1912 Mississippi produced more cottonwood lumber than any other state. Four states stood first in three species each in 1912, and one, California, in four.

STATE.	Kind or kinds of wood in the production of which the specified state ranked first in 1912.
Arkansas	Hickory and red gum.
California	Redwood, sugar pine, western pine, and white fir.
Colorado	Lodgepole pine.
Louisiana	Cypress, tupelo, and yellow pine.
Maine	Balsam fir and spruce.
Michigan	Beech, elm, and maple.
Minnesota	White pine.
Mississippi	Cottonwood.
Missouri	Sycamore.
Montana	Larch.
Ohio	Ash and walnut.
Washington	Cedar and Douglas fir.
West Virginia	Chestnut, oak, and tulip poplar.
Wisconsin	Basswood, birch, and hemlock.

In a number of states the production of a certain kind of lumber exceeds the combined output of all others. In eight of the principal lumber states the production of yellow pine surpasses in volume the production of all other woods together. These states are shown in the tabular statement below. White pine constitutes more than half the total production in the state of Minnesota only, and Douglas fir in Oregon and Washington. The almost complete possession which yellow pine takes of a region where it finds conditions favorable is apparent from the figures in the statement below, the proportion which it constitutes of the total output ranging from 62.2 per cent in Arkansas to 96.4 per cent in Texas.

STATE.	Principal kind of wood sawed into lumber.	Per cent which specified kind of wood formed of total lumber production of state in 1912.
Alabama	Yellow pine	88.2
Arkansas	Yellow pine	62.2
Florida	Yellow pine	90.0
Louisiana	Yellow pine	75.6
Minnesota	White pine	85.3
Mississippi	Yellow pine	85.2
North Carolina	Yellow pine	75.6
Oregon	Douglas fir	83.0
Texas	Yellow pine	96.4
Virginia	Yellow pine	63.0
Washington	Douglas fir	82.5

SHINGLES.

The production of shingles has declined slowly since 1909, and was smaller in 1912 than in 1908. Western red cedar, sawed most extensively in Washington, Oregon, and Idaho, is the leading shingle wood of this country, and has supplied from 70 to nearly 80 per cent of the total output each year since 1908. All cedar shingles, however, are not the product of western red cedar. Some are made from the northern and the southern white cedars. Cypress stands second in the quantity of shingles produced. The yellow pine shingles are sawed from four or more species, the white pine from two or three, but chiefly from the eastern and northern *Pinus strobus*.

TABLE 33.—LUMBER, LATH, AND SHINGLES—**Shingles**—PRODUCTION AND PER CENT DISTRIBUTION, BY KINDS OF WOOD: 1912, 1911, AND 1910.

KIND OF WOOD.	SHINGLES PRODUCED.					
	1912		1911		1910	
	Quantity (thousands).	Per cent distribution.	Quantity (thousands).	Per cent distribution.	Quantity (thousands).	Per cent distribution.
Total	12,037,685	100.0	12,113,867	100.0	12,976,362	100.0
Cedar	9,500,908	78.9	9,633,914	79.5	10,108,643	77.9
Cypress	1,311,750	10.9	1,230,645	10.2	1,180,217	9.1
Yellow pine	578,307	4.8	650,332	5.4	863,149	6.7
Redwood	447,197	3.7	395,786	3.3	437,701	3.4
White pine	68,806	0.6	83,809	0.7	146,555	1.1
Chestnut	45,084	0.4	40,840	0.3	52,091	0.4
Western pine	30,308	0.3	15,882	0.1	27,277	0.2
Hemlock	24,140	0.2	26,171	0.2	42,447	0.3
Spruce	8,003	0.1	12,381	0.1	68,745	0.5
All other kinds	23,182	0.2	24,107	0.2	49,537	0.4

LATH.

The production of lath has shown a downward tendency during the past eight years, and the figures for 1912 are the smallest for the whole period. The production in that year was about 252,000,000 smaller than in 1911, and 984,000,000 below that of 1909. Forty-four states reported the production of lath in 1912—those not reporting any being North Dakota, Rhode Island, Nebraska, and Kansas. Lath are a by-product of sawmills and are made of material which would otherwise be of little value, such as slabs, crooked and defective logs, and scraps that are unsalable as lumber. Shingles are also made to some extent as a by-product, but first class shingles require the best quality of lumber. Washington led in the production of lath in 1912, followed by Louisiana and Minnesota, but in 1911 Minnesota was first, Louisiana second, and Washington third. These three states produced more than one-third of all the lath made in the United States in 1912; and the same states, with Maine and Wisconsin added, produced over half of the total.

TABLE 34.—LUMBER, LATH, AND SHINGLES—**Lath**—PRODUCTION AND PER CENT DISTRIBUTION, BY STATES: 1912, 1911, AND 1910.

STATE.	LATH PRODUCED.					
	1912		1911		1910	
	Quantity (thousands).	Per cent distribution.	Quantity (thousands).	Per cent distribution.	Quantity (thousands).	Per cent distribution.
United States	2,719,163	100.0	2,971,110	100.0	3,494,718	100.0
Washington	336,538	12.4	338,578	11.4	445,119	12.7
Louisiana	330,474	12.2	355,516	12.0	457,437	13.1
Minnesota	269,095	9.9	402,962	13.5	415,478	11.9
Wisconsin	257,657	9.5	319,973	10.8	296,502	8.5
Maine	210,023	7.7	199,602	6.7	253,752	7.3
Michigan	173,415	6.4	178,404	6.0	194,627	5.6
West Virginia	159,119	5.9	129,601	4.4	164,200	4.7
Oregon	131,734	4.8	95,525	3.2	190,660	5.5
All other states [1]	851,108	31.3	950,949	32.0	1,076,943	30.8

[1] Includes Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, and Wyoming.

DETAILED SUMMARY.

Table 35, given in two parts, one for hardwoods, the other for softwoods, summarizes the preceding tables and brings together in convenient form the figures for the various states and the different woods. North Dakota did not report the production of any lumber; and the three states of Kansas, Nebraska, and Nevada are together credited with a production of only 22,525,000 feet in 1912, sawed by 12 mills. Redwood is the only species from which lumber was produced in but one state, though sugar pine lumber was sawed in two. Oak and cottonwood were reported by more states than any other woods.

TABLE 35.—LUMBER, LATH, AND SHINGLES—NUMBER OF ACTIVE MILLS

	STATE.	Number of active mills reporting.	LUMBER SAWED (M FEET B. M.).					
			Aggregate.	Softwoods.				
				Total.	Yellow pine.	Douglas fir.	White pine.	Hemlock.
1	United States	29,648	39,158,414	30,526,416	14,737,052	5,175,123	3,138,227	2,426,554
2	Alabama	1,249	1,378,151	1,225,537	1,214,994			
3	Arizona	12	76,287	76,286				
4	Arkansas	1,145	1,821,811	1,176,953	1,133,459			
5	California	229	1,203,059	1,196,992		105,625		1,348
6	Colorado	135	88,451	88,191		2,816	1,500	
7	Connecticut	215	109,251	25,484	701		16,422	7,857
8	Delaware	86	28,285	21,737	21,663			
9	Florida	397	1,067,525	1,063,161	960,735			
10	Georgia	1,117	941,291	868,227	799,370		3,087	
11	Idaho	202	713,575	711,993		51,845	309,564	7,340
12	Illinois	463	122,528	5,056	1,560			
13	Indiana	978	401,017	1,143	205		15	90
14	Iowa	157	46,593	22,354			22,324	
15	Kentucky	1,386	641,296	47,742	25,755		1,506	14,040
16	Louisiana	460	3,876,211	3,582,359	2,928,632			
17	Maine	826	882,128	790,582	3,756		280,145	89,142
18	Maryland	404	174,320	81,028	59,144		1,626	16,970
19	Massachusetts	420	259,329	204,824	2,682		143,119	19,623
20	Michigan	792	1,488,827	742,347			141,003	535,446
21	Minnesota	484	1,436,726	1,380,308			1,225,674	5,007
22	Mississippi	952	2,381,898	2,046,963	2,029,276			
23	Missouri	1,210	422,470	76,431	48,000			
24	Montana	118	272,174	271,869		39,325	7,363	10
25	New Hampshire	441	479,499	417,920	7,066		240,215	51,289
26	New Jersey	146	34,810	14,580	11,832		116	410
27	New Mexico	41	82,650	82,645		1,958	230	
28	New York	1,487	502,351	252,050			76,355	123,924
29	North Carolina	2,418	2,193,308	1,794,654	1,658,744		60,727	35,539
30	Ohio	1,156	499,834	9,350	1,665		498	7,080
31	Oklahoma	200	168,806	122,897	122,685			
32	Oregon	480	1,916,160	1,904,238		1,589,670	1,305	30,681
33	Pennsylvania	1,724	992,180	481,156	21,647		71,870	386,188
34	Rhode Island	22	14,421	6,740	916		5,742	82
35	South Carolina	750	816,930	778,939	751,198		1,232	89
36	South Dakota	28	20,986	20,676		150		
37	Tennessee	1,567	932,572	192,948	94,159		23,646	30,486
38	Texas	450	1,902,201	1,836,899	1,833,902			
39	Utah	59	9,055	8,426		1,324	790	
40	Vermont	507	235,983	138,952	1,912		16,664	36,784
41	Virginia	2,126	1,569,997	1,099,500	989,622		26,193	39,185
42	Washington	788	4,099,775	4,097,541		3,381,395	41,762	161,630
43	West Virginia	961	1,318,732	464,005	11,769		19,740	215,893
44	Wisconsin	792	1,498,876	1,061,023			397,549	610,421
45	Wyoming	56	13,560	13,507		1,015	245	
46	All other states [1]	12	22,525	20,203	3			

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[1] Includes Kansas, Nebraska, and Nevada.

Reporting and Quantity of Each Class of Product, by States: 1912.

LUMBER SAWED (M FEET B. M.)—continued.										
Softwoods—Continued.										
Spruce.	Western pine.	Cypress.	Redwood.	Larch.	Cedar.	Sugar pine.	White fir.	Balsam fir.	Lodgepole pine.	
1,238,600	1,219,444	997,227	496,796	407,064	329,000	132,416	122,613	84,261	22,039	1
....	....	5,308	....	....	5,235	....	....	....	....	2
....	76,286	....	....	....	....	....	....	....	....	3
....	....	43,238	....	....	256	....	....	....	....	4
12,847	365,169	....	496,796	....	18,507	128,376	68,324	....	....	5
19,301	51,732	....	....	....	....	....	1,145	....	11,697	6
214	....	....	....	....	290	....	....	....	....	7
....	....	15	....	....	59	....	....	....	....	8
....	....	101,429	....	....	997	....	....	....	....	9
....	....	62,941	....	....	2,829	....	....	....	....	10
970	179,863	....	....	111,008	35,165	....	15,421	....	817	11
....	....	3,496	....	....	....	....	....	....	....	12
....	....	2	....	22	809	....	....	....	....	13
....	....	....	....	30	....	....	....	....	....	14
1,076	....	2,535	....	....	2,830	....	....	....	....	15
....	....	653,727	....	....	....	....	....	....	....	16
365,331	....	....	....	563	4,682	....	....	46,963	....	17
2,516	....	624	....	....	148	....	....	....	....	18
38,805	....	....	....	34	354	....	....	207	....	19
14,776	....	....	....	29,833	15,390	....	....	5,899	....	20
67,639	....	....	....	68,587	894	....	....	12,507	....	21
....	....	17,626	....	....	61	....	....	....	....	22
....	....	24,146	....	....	4,285	....	....	....	....	23
7,432	94,093	....	....	120,779	348	....	560	....	1,959	24
115,301	....	....	....	78	140	....	....	3,831	....	25
42	....	....	....	....	2,180	....	....	....	....	26
3,632	76,772	....	....	....	....	....	53	....	....	27
51,519	....	....	....	20	76	....	....	156	....	28
5,396	....	30,068	....	....	3,970	....	....	210	....	29
79	....	....	....	....	28	....	....	....	....	30
....	....	212	....	....	....	....	....	....	....	31
70,938	152,769	....	....	13,420	20,654	4,040	20,665	....	96	32
342	....	....	....	76	892	....	....	141	....	33
....	....	....	....	....	....	....	....	....	....	34
50	....	26,338	....	....	32	....	....	....	....	35
....	20,526	....	....	....	....	....	....	....	....	36
2,824	....	10,537	....	....	31,296	....	....	....	....	37
....	....	2,947	....	....	50	....	....	....	....	38
1,330	4,081	....	....	....	....	....	441	....	460	39
72,379	....	....	....	54	639	....	....	10,520	....	40
13,901	....	12,038	....	268	18,283	....	....	10	....	41
139,325	177,108	....	....	29,884	153,518	....	12,919	....	....	42
216,589	....	....	....	....	14	....	....	....	....	43
12,941	....	....	....	32,408	3,887	....	....	3,817	....	44
1,105	4,045	....	....	....	2	....	85	....	7,010	45
....	17,000	....	....	....	200	....	3,000	....	....	46

TABLE 35.—LUMBER, LATH, AND SHINGLES—NUMBER OF ACTIVE MILLS REPORTING

	STATE.	LUMBER SAWED (M FEET B. M.)—continued.							
		Hardwoods.							
		Total.	Oak.	Maple.	Red gum.	Tulip poplar.	Chestnut.	Beech.	Birch.
1	United States	8,631,998	3,318,952	1,020,864	694,260	623,289	554,230	435,250	388,272
2	Alabama	152,614	73,316	2,060	22,452	25,703	1,043	1,095	1
3	Arizona	1	1	....	....	....	....	....	....
4	Arkansas	644,858	260,397	4,108	211,920	988	....	103	72
5	California	6,067	3,667	....	....	....	....	....	150
6	Colorado	260	....	....	....	....	....	....	....
7	Connecticut	83,767	20,256	2,130	....	228	54,463	1,150	1,256
8	Delaware	6,548	4,132	596	1,065	362	149	112	....
9	Florida	4,364	430	31	803	647	....	....	....
10	Georgia	73,064	38,135	367	9,714	16,736	861	184	17
11	Idaho	1,582	....	....	....	....	....	....	....
12	Illinois	117,472	59,125	5,045	8,772	1,476	....	5,539	283
13	Indiana	399,874	166,637	33,032	14,201	17,803	1,926	70,166	565
14	Iowa	24,239	7,662	1,409	....	....	....	1	383
15	Kentucky	593,554	321,656	8,217	28,136	91,225	26,624	39,051	896
16	Louisiana	293,852	98,271	7	63,573	537	....	32	....
17	Maine	91,546	10,600	11,423	....	....	....	7,264	51,110
18	Maryland	93,292	48,707	5,861	3,650	4,490	23,022	1,144	1,254
19	Massachusetts	54,505	11,106	4,773	....	....	23,762	3,333	4,525
20	Michigan	746,480	18,124	453,110	....	....	....	92,106	55,350
21	Minnesota	56,418	14,134	1,255	....	....	....	117	6,452
22	Mississippi	334,935	102,431	817	121,354	15,757	....	149	1
23	Missouri	346,039	206,147	9,557	54,564	1,470	....	170	1,038
24	Montana	305	....	....	....	....	....	....	....
25	New Hampshire	61,579	15,134	11,256	....	....	3,737	8,986	18,132
26	New Jersey	20,230	8,173	485	217	798	8,921	167	91
27	New Mexico	5	5	....	....	....	....	....	....
28	New York	250,301	24,590	76,891	150	....	17,158	40,761	31,395
29	North Carolina	398,654	187,066	9,253	32,692	71,779	50,033	697	2,993
30	Ohio	490,484	222,704	46,750	1,838	49,583	18,236	41,893	742
31	Oklahoma	45,909	25,885	439	4,157	....	....	....	18
32	Oregon	11,922	7,929	1,383	....	....	....	....	....
33	Pennsylvania	511,024	209,473	81,617	1,454	14,413	93,294	49,686	17,666
34	Rhode Island	7,681	1,985	457	....	....	4,714	60	85
35	South Carolina	37,991	12,920	653	14,479	6,338	11	21	15
36	South Dakota	310	....	....	....	....	....	....	....
37	Tennessee	739,624	378,747	14,845	69,612	107,265	46,987	11,879	1,422
38	Texas	65,302	39,758	102	13,281	....	....	50	....
39	Utah	629	....	....	....	....	....	....	....
40	Vermont	97,031	5,498	30,435	....	....	689	13,144	31,551
41	Virginia	470,497	279,580	9,011	13,165	76,709	54,775	3,134	1,441
42	Washington	2,234	13	142	....	....	....	....	2
43	West Virginia	854,727	404,637	74,182	3,011	118,982	123,825	40,143	19,295
44	Wisconsin	437,853	29,504	118,765	....	....	....	2,913	140,071
45	Wyoming	53	3	....	....	....	....	....	....
46	All other states[1]	2,322	414	400	....	....	....	....	....

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[1] Includes Kansas, Nebraska, and Nevada.

AND QUANTITY OF EACH CLASS OF PRODUCT, BY STATES: 1912—Continued.

LUMBER SAWED (M FEET B. M.)—continued.									Laths produced (thousands).	Shingles produced (thousands).	
Hardwoods—Continued.											
Basswood.	Hickory.	Elm.	Ash.	Cottonwood.	Tupelo.	Sycamore.	Walnut.	All other.			
296, 717	278, 757	262, 141	234, 548	227, 477	122, 545	49, 468	43, 083	82, 145	2, 719, 163	12, 037, 685	1
560	6, 697	2, 217	1, 974	1, 572	12, 748	794	273	109	56, 595	126, 205	2
....	....	....	....	....	....	....	....	....	7, 985	....	3
152	56, 757	13, 172	23, 681	58, 931	6, 221	7, 538	266	552	90, 216	114, 458	4
....	....	....	210	2	....	....	....	2, 038	18, 954	471, 592	5
....	....	....	....	260	....	....	....	....	4, 975	265	6
433	1, 842	152	1, 414	137	75	45	73	113	1, 409	2, 240	7
....	97	....	25	....	10	....	....	....	765	290	8
....	624	20	290	557	946	9	3	4	51, 078	309, 081	9
277	1, 274	203	2, 838	248	887	110	82	1, 131	37, 702	216, 688	10
....	....	....	....	1, 582	....	....	....	....	50, 895	37, 641	11
90	9, 579	6, 874	2, 774	2, 522	4, 337	3, 249	5, 197	2, 610	366	50	12
7, 389	19, 039	27, 463	21, 549	3, 110	441	7, 850	6, 425	2, 278	2, 244	195	13
2, 257	352	4, 981	442	5, 786	....	176	655	135	4, 734	1, 260	14
6, 986	30, 748	3, 797	9, 588	2, 498	121	4, 837	5, 855	13, 319	10, 481	8, 623	15
117	12, 030	2, 100	14, 395	36, 721	54, 581	180	2	11, 306	330, 474	718, 026	16
5, 499	....	407	3, 169	1, 981	....	....	....	93	210, 023	393, 772	17
1, 157	1, 717	177	555	67	44	429	284	734	6, 535	3, 437	18
736	503	262	1, 628	773	....	5	228	2, 871	5, 032	7, 310	19
53, 533	1, 051	52, 757	14, 280	4, 142	19	579	177	1, 252	173, 415	459, 359	20
13, 713	22	12, 245	3, 235	5, 208	....	....	25	12	269, 095	30, 834	21
23	11, 758	5, 759	9, 051	59, 228	5, 327	257	66	2, 957	81, 315	72, 700	22
467	14, 060	22, 279	6, 298	11, 967	4, 602	8, 223	4, 635	562	4, 128	33, 917	23
....	....	....	....	305	....	....	....	....	15, 064	210	24
1, 493	23	350	1, 759	626	....	4	2	77	11, 487	8, 847	25
26	907	70	175	3	....	51	79	67	19, 016	29, 129	26
....	....	....	....	....	....	....	....	....	9, 097	....	27
28, 513	1, 253	13, 684	10, 706	1, 462	....	1	8	3, 729	28, 188	27, 919	28
8, 128	9, 616	52	5, 473	500	16, 514	369	754	2, 735	94, 086	196, 943	29
14, 920	20, 727	28, 968	26, 100	2, 444	388	3, 104	8, 565	3, 522	14, 051	488	30
152	2, 539	1, 304	7, 201	1, 810	....	2, 043	343	18	9, 391	2, 547	31
....	....	....	884	1, 676	....	....	....	50	131, 734	271, 205	32
10, 925	9, 826	2, 994	10, 336	46	100	575	2, 268	6, 351	78, 758	26, 957	33
....	115	15	220	10	....	....	20	....	....	432	34
15	488	186	791	132	1, 596	17	207	122	13, 259	57, 812	35
....	....	....	....	310	....	....	....	....	381	271	36
9, 460	42, 048	6, 176	18, 434	8, 953	5, 012	6, 956	3, 736	8, 092	16, 575	29, 713	37
....	2, 298	852	3, 283	4, 696	555	125	2	300	28, 152	73, 870	38
....	....	....	....	629	....	....	....	....	172	177	39
7, 957	11	1, 348	3, 971	1, 950	....	....	8	469	4, 538	9, 363	40
9, 343	4, 830	163	4, 881	165	7, 246	757	1, 123	4, 174	71, 356	27, 752	41
....	....	....	92	1, 985	....	....	....	....	336, 538	7, 996, 251	42
32, 986	15, 529	165	8, 110	60	775	1, 155	1, 597	10, 275	159, 119	1, 441	43
79, 389	120	50, 608	14, 699	1, 628	....	....	68	88	257, 657	267, 945	44
....	....	....	....	50	....	....	....	....	128	470	45
21	277	341	37	745	....	30	57	....	2, 000	....	46

VALUES.

The average lumber values for 1912 shown in Table 36 are not absolute average values for the entire lumber production of the country, since they were compiled from the "mill-run" values shown in Table 37, the sources of which are explained below. The 1912 values in Table 36 do, however, represent reports from the largest mills in states which produce 88 per cent of the total production of lumber and are therefore approximately correct. The figure for yellow pine is based on prices received by mills in the Southern states for shortleaf, longleaf, and loblolly pine, which together make up about 98 per cent of the yellow-pine production. The value for Douglas fir is an average of reports from Washington, Oregon, California, and Idaho, which produce practically all of this lumber. In computing the values of white pine, hemlock, and spruce, both eastern and western species were considered, but the larch and cedar figures stand for western larch and western red cedar, respectively. The value for western pine is the average value of western yellow pine in California, Washington, Idaho, and Montana. The oak value is for the red and white oaks of the central hardwood region. Maple includes both hard and soft maple; birch and hard maple are about equal in value, but soft maple is a cheaper wood. Elm includes the valuable rock elm and the inferior soft elm, while ash includes white ash and brown ash. The price shown for cottonwood is for southern cottonwood only.

Table 36 shows the average value of all lumber cut in 1912 to be $15.35; the average for softwoods was $14.54 and for hardwoods $18.25. The increase over 1911 is due largely to the rise in value of yellow pine, Douglas fir, white pine, oak, hemlock, and spruce, which together constituted nearly 77 per cent of the total lumber production in 1912. Western pine, cypress, and white fir are the only softwoods shown in Table 36 which had a lower value in 1912 than in 1911. The most noticeable changes in hardwood values are the advance in those of oak and birch and the decline in those of tulip poplar and beech.

Table 37 shows wholesale prices, f. o. b. mill, of different grades and kinds of lumber, lath, and shingles for the years 1912 and 1911. The grades quoted are representative of those adopted by the leading lumber manufacturers' associations of the United States, and the prices are taken from a former quarterly publication of the Forest Service, *Record of Wholesale Prices of Lumber*. The prices of graded lumber for 1911 are averages of the corresponding figures published in the four issues of the *Record* for that year. Publication of the *Record* was discontinued with the issue for July, August, and September, 1912, and the prices for 1912 are therefore averages of the corresponding prices for the first three quarters of that year. The prices published in the *Record* were compiled from reports secured from a selected list of about 1,000 large sawmills scattered throughout the United States, and, since 80 per cent of the annual output of lumber is produced by large mills, these grade prices are representative. Being averages for 12 months and for mills located at different shipping points in each state, these values should not be understood as wholesale quotations f. o. b. any shipping point at any one time. Quotations on grades often vary by several dollars during the year and the difference in freight rates for different sections of any one state often causes a marked difference in lumber values f. o. b. mill.

Further, the values for grades should not be confused with the "mill-run" or average value of lumber. The high prices paid for the upper grades of white pine and hardwoods are for stock which must be almost free from defects and must often come in long lengths and wide widths. Similarly, the high prices shown for some grades of yellow pine, North Carolina pine, Douglas fir, etc., are for planing-mill products, such as flooring and ceiling, which must not only come from high-grade stock but must be dressed, tongued, and grooved. It is common knowledge that in sawing most species of lumber the upper grades constitute a small percentage of the sawmill output, while the greater proportion of the output goes into common boards and dimensions, which sell for less than the prices quoted in Table 37 for "mill-run" or average value of lumber.

Table 37 also shows, in boldface type, the "mill-run" or average value of lumber, f. o. b. mill, for the years 1912 and 1911. The values for 1911 are those which were published in the report on lumber, lath, and shingles for 1911, and were compiled from the four issues of the *Record of Wholesale Prices of Lumber* for that year, and from reports received from a special list of 5,000 sawmills. "Mill-run" values for 1912 were averaged from the corresponding figures in the three issues of the *Record* for that year. The values for the two years are therefore not exactly comparable, but since neither series was compiled from reports made by all sawmills in the country, and since the values taken from the *Record of Wholesale Prices of Lumber* were originally compiled from reports submitted by the largest mills, they are approximately correct.

On the whole, lumber values were higher in 1912 than in 1911. During 1911 prices generally declined after the first quarter of the year, and during the last three months the values of many woods were the lowest for the entire year, the exceptions in the last quarter being redwood on the Pacific coast, yellow pine and North Carolina pine in the Atlantic Coast states, West Virginia spruce, and a few hardwoods. The first quarter of 1912 showed decided improvements in all producing states for yellow pine and North Carolina pine and for eastern hemlock, but no general gains were apparent in other softwoods, while hardwoods went up only in the Lake states. During the second quarter there were advances in all western species except larch and western white pine, in all eastern softwoods except North Carolina pine, and in some of the hardwoods. The rise in prices continued through the months of July, August, and September. All western species followed this advance except western yellow pine and Sitka spruce. In the East only white pine and spruce among the softwoods failed to follow the market, while again some hardwoods advanced and some remained stationary. Thus, while the prices of but few species rose continuously through 1912, the general condition of the lumber business improved continuously from the first of the year.

The lumber values presented in Tables 36 and 37 reflect the condition of the lumber trade up to October 1, 1912, only, but the data are sufficient to allow a comparison of 1912 market conditions with those of 1911 and preceding years.

TABLE 36.—LUMBER, LATH, AND SHINGLES—AVERAGE VALUE OF LUMBER PER THOUSAND FEET BOARD MEASURE, BY KINDS OF WOOD, FOR SPECIFIED YEARS: 1899 TO 1912.

KIND OF WOOD.	1912	1911	1910	1909	1908	1907	1906	1904	1899
All kinds	$15.35	$15.05	$15.30	$15.38	$15.37	$16.56	$16.54	$12.76	$11.13
SOFTWOODS.									
Yellow pine	14.36	13.87	13.29	12.69	12.66	14.02	15.02	9.96	8.46
Douglas fir	11.58	11.05	13.09	12.44	11.97	14.12	14.20	9.51	8.67
White pine	19.13	18.54	18.93	18.16	18.17	19.41	18.32	14.93	12.69
Hemlock	13.68	13.59	13.85	13.95	13.65	15.53	15.31	11.91	9.98
Western pine	13.62	13.88	14.26	15.39	15.03	15.67	14.01	11.30	9.70
Spruce	17.02	16.14	16.62	16.91	16.25	17.26	17.33	14.03	11.27
Cypress	20.09	20.54	20.51	20.46	21.30	22.12	21.94	17.50	13.32
Redwood	14.13	13.99	15.52	14.80	15.66	17.70	16.64	12.83	10.12
Cedar	14.45	13.86	15.53	19.95	18.03	19.14	18.12	14.35	10.91
Larch	11.96	11.87	11.85	12.39	11.81	13.07	11.91	8.94	8.00
White fir	9.86	10.64	11.52	13.10	11.38	15.45	12.91	(1)	(1)
Tamarack	(1)	(1)	13.30	13.18	12.86	15.71	15.63	12.42	12.48
Sugar pine	(1)	17.52	18.68	18.14	17.78	19.84	16.11	(1)	12.30
Balsam fir	(1)	13.42	14.48	13.99	14.36	16.16	(1)	(1)	(1)
Lodgepole pine	(1)	12.41	14.88	16.25	(1)	(1)	(1)	(1)	(1)
HARDWOODS.									
Oak	19.63	19.14	18.76	20.50	21.23	21.23	21.76	17.51	13.78
Maple	15.56	15.49	16.16	15.77	16.30	16.84	15.53	14.94	11.83
Tulip poplar	24.06	25.46	24.71	25.39	25.30	24.91	24.21	18.99	14.03
Red gum	12.60	12.11	12.26	13.20	13.08	14.10	13.46	10.87	9.63
Chestnut	16.62	16.63	16.23	16.12	16.27	17.04	17.49	13.78	13.37
Birch	17.43	16.61	17.37	16.95	16.42	17.37	17.24	15.44	12.50
Beech	13.51	14.09	14.34	13.25	13.50	14.30	14.05	(1)	(1)
Basswood	19.26	19.20	20.94	19.50	20.50	20.03	18.66	16.86	12.84
Hickory	23.29	22.47	26.55	30.80	29.66	29.50	30.42	23.94	18.78
Elm	16.87	17.13	18.67	17.52	18.40	18.45	18.08	14.45	11.47
Ash	20.27	21.21	22.47	24.44	25.51	25.01	24.35	18.77	15.84
Cottonwood	20.44	18.12	17.78	18.05	17.76	18.42	17.15	14.92	10.37
Tupelo	13.61	12.46	12.14	11.87	13.36	14.48	14.13	(1)	(1)
Sycamore	(1)	13.16	14.10	14.77	14.67	14.58	(1)	(1)	11.04
Walnut	(1)	31.70	34.91	42.79	42.53	43.31	42.25	45.64	36.49

[1] Not reported separately.

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912.

WESTERN SPECIES.

SPECIES AND GRADE.	CALIFORNIA.		OREGON.		WASHINGTON.		IDAHO.		MONTANA.	
	1911	1912	1911	1912	1911	1912	1911	1912	1911	1912
WESTERN RED CEDAR.										
Beveled siding No. 1, ½"x6"	......	......	......	......	$16.30	$17.90	......	......	......	......
Shop No. 2, 1½"x8"	......	......	......	......	14.66	15.63	......	......	......	......
Shingles, perfection, 18"	......	......	......	......	2.43	2.58	......	......	......	......
Shingles, extra clear, 5/2"–16"	......	......	......	......	1.87	2.00	......	......	......	......
Shingles, Star-A-Star, 6/2"–16"	......	......	......	......	1.49	1.68	......	......	......	......
Mill run (av. price of lumber)	......	......	......	......	**12.11**	**14.45**	......	......	......	......
DOUGLAS FIR.										
Flooring No. 1, v. g., 1"x4". K. D	......	......	$26.40	$25.51	23.54	24.15	......	......	......	......
Flooring No. 2, v. g., 1"x4". K. D	......	......	22.54	21.80	20.40	20.54	......	......	......	......
Flooring No. 2, flat, 1"x4". K. D	......	......	15.97	15.25	13.23	14.10	......	......	......	......
Finish No. 2 and better, 6"	......	......	22.46	21.40	19.87	20.23	......	......	......	......
Drop siding, No. 2 slash	......	......	18.04	16.13	14.77	15.11	......	......	......	......
Dimension, Com., S1S1E, 2"x12"–16'	......	......	9.05	9.34	8.07	8.81	......	......	......	......
Car sills, 5"x8"–36'	......	......	15.29	14.10	11.83	13.90	......	......	......	......
Timbers, 12"x12", average, 32'	......	......	9.78	9.99	9.05	9.90	......	......	......	......
Crossties, 7"x9"	......	......	9.08	9.05	8.59	8.96	......	......	......	......
Lath, per M	......	......	1.56	1.57	1.25	1.44	......	......	......	......
Mill run (av. price of lumber)	**$12.74**	**$12.54**	**11.08**	**11.62**	**10.95**	**11.53**	**$11.95**	**$11.80**	......	......
WHITE FIR.										
Common boards, 6" and 8"	......	......	8.99	9.67	7.51	8.12	11.69	10.64	......	......
Mill run (av. price of lumber)	......	......	......	......	**9.08**	**9.83**	**10.32**	**9.88**	......	......
WESTERN HEMLOCK.										
Flooring, Nos. 1 and 2, v. g., 1"x4"	......	......	......	......	21.47	21.28	......	......	......	......
Finish Nos. 1 and 2, 5" and wider	......	......	......	......	19.38	20.07	......	......	......	......
Dimension, No. 1, Com., 2"x4" to 2"x8"	......	......	......	......	7.43	8.18	......	......	......	......
Shiplap, 1"	......	......	......	......	8.20	8.45	......	......	......	......
Shop No. 1, 1½"x8" and wider	......	......	......	......	15.75	12.42	......	......	......	......
Mill run (av. price of lumber)	......	......	......	......	**9.70**	**9.33**	......	......	......	......
WESTERN LARCH.										
Flooring, A and B (Nos. 1 and 2 clear), 1"x4"	......	......	......	......	......	......	21.57	19.83	$21.45	$17.88
Finish, A and B (Nos. 1 and 2 clear), 1"x8"	......	......	......	......	......	......	18.38	......	25.26	21.49
Drop siding, A and B (Nos. 1 and 2 clear), 1"x6"	......	......	......	......	......	......	16.33	18.58	21.15	17.68
Common boards No. 2, 1"x8"–16'	......	......	......	......	......	......	12.04	11.14	14.79	13.96
Dimension No. 1, Com., 2"x8"–16'	......	......	......	......	......	......	10.11	10.55	11.45	11.54
Lath, per M	......	......	......	......	......	......	......	1.37	1.75	1.54
Mill run (av. price of lumber)	......	......	......	......	......	......	**10.58**	**11.73**	**12.02**	**12.18**
SUGAR PINE.										
Firsts and seconds, clear	51.59	......	......	......	......	......	......	......	......	......
Shop No. 1, 2"x8" and wider	32.47	......	......	......	......	......	......	......	......	......
Shop No. 2, 2"x8" and wider	22.82	18.06	......	......	......	......	......	......	......	......
WESTERN WHITE PINE.										
Finish, C select, 8"	......	......	......	......	......	......	34.98	35.12	......	......
Finish, D select, 8"	......	......	......	......	......	......	26.90	25.76	......	......
Beveled siding, B and better, 4" and 6"	......	......	......	......	......	......	25.14	23.90	......	......
Beveled siding, C, 4" and 6"	......	......	......	......	......	......	22.11	20.34	......	......
Common boards No. 2, 6" and 8"	......	......	......	......	......	......	16.16	15.57	......	......
Mill run (av. price of lumber)	......	......	......	......	......	......	**17.57**	**17.93**	......	......

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

WESTERN SPECIES—Continued.

SPECIES AND GRADE.	CALIFORNIA.		OREGON.		WASHINGTON.		IDAHO.		MONTANA.	
	1911	1912	1911	1912	1911	1912	1911	1912	1911	1912
WESTERN YELLOW PINE.										
Flooring, B and better (Nos. 1 and 2 clear), 4" and 6"–16'	$43.95	......	......	......	$35.17	......	$33.17	$35.00	$39.01	......
Finish, B select and better, 1" by 10"–16'	44.18	......	......	......	37.17	$34.17	42.23	38.63	43.19	......
Finish, C select, 8"	38.28	......	......	......	29.90	29.12	28.97	30.38	33.46	$34.67
Beveled siding, B and better, 4" and 6"	24.75	......	......	......	21.09	21.56	23.83	23.00	23.37	20.67
Beveled siding, C, 4" and 6"	21.53	......	......	......	18.40	17.69	19.61	19.18	19.76	17.50
Shop No. 1, 6/4	27.53	$24.71	......	......	24.61	24.92	23.19	25.60	25.39	25.33
Shop No. 2, 6/4	19.21	15.77	......	......	17.24	16.76	16.43	16.19	18.28	17.33
Common boards, No. 2, 1"x8"–16'	13.63	13.85	......	......	13.25	14.02	13.74	13.55	15.45	15.94
Dimension, No. 1, Com., 2"x8"–16'	14.00	14.33	......	......	9.69	9.21	11.06	11.92	12.84	13.25
Lath No. 1, per M	2.27	......	......	......	2.80	2.28	2.89	2.27	3.09	2.83
Mill run (av. price of lumber)	**14.40**	**13.85**	......	......	**12.57**	**12.73**	**14.45**	**13.38**	**14.45**	**14.83**
REDWOOD.										
Clear, 6" to 12", 10' to 20'	24.72	22.75	......	......	......	......	......	......	......	......
Sappy clear, 6" to 8", 10' to 20'	20.24	18.56	......	......	......	......	......	......	......	......
Common boards No. 1	13.45	13.68	......	......	......	......	......	......	......	......
Common boards No. 2	10.89	11.06	......	......	......	......	......	......	......	......
Crossties, 6"x8"–8'	11.61	10.00	......	......	......	......	......	......	......	......
Shingles No. 1, per M (full count)	1.54	1.67	......	......	......	......	......	......	......	......
Shingles No. 2, per M (full count)	1.05	1.19	......	......	......	......	......	......	......	......
Mill run (av. price of lumber)	**13.99**	**14.13**	......	......	......	......	......	......	......	......
SITKA SPRUCE.										
Shop No. 1, 6/4	......	......	......	......	17.68	16.88	......	......	......	......
Finish No. 2, clear and better, 1"x12"	......	......	......	......	30.89	30.70	......	......	......	......
Flooring No. 2, clear and better, 1"x4"	......	......	......	......	30.38	29.18	......	......	......	......
Beveled siding, B, ½"x6"	......	......	......	......	16.05	16.31	......	......	......	......
Common boards, 1"x12"	......	......	......	......	9.47	10.30	......	......	......	......
Mill run (av. price of lumber)	......	......	......	......	**12.89**	**13.88**	......	......	......	......

EASTERN SOFTWOODS.

SPECIES AND GRADE.	TEXAS.		ARKANSAS.		LOUISIANA.		MISSISSIPPI.		ALABAMA.	
	1911	1912	1911	1912	1911	1912	1911	1912	1911	1912
YELLOW PINE. (Mississippi Valley Mills.)										
Flooring, B, v. g. 13/16"x3¼"	$28.19	$28.96	$27.99	$29.13	$27.80	$28.85	$28.59	$29.19	$28.16	$29.15
Flooring, No. 2, D. & M., 1"x4"	10.70	11.62	11.23	11.61	10.75	11.25	9.95	10.72	9.91	10.81
Flooring, No. 2, S2S and C. M., 1"x6"	10.43	11.79	11.39	12.31	11.02	12.08	11.09	12.15	11.00	11.88
Flooring, B, flat, 13/16"x3¼"	18.65	20.23	19.19	19.54	18.56	19.48	18.56	19.78	18.41	19.31
Finish, B and better, 6" and wider	23.80	24.60	24.83	24.83	23.09	23.65	22.08	22.81	21.44	22.52
Dimension No. 1, S1S1E 2"x8"–16'	11.86	13.61	12.59	13.22	12.12	13.13	12.07	13.52	12.16	12.97
Com. boards, No. 1, S2S, 1"x10"	14.29	15.22	14.77	15.48	14.52	15.12	15.61	16.55	15.89	16.73
Com. boards, No. 2, S2S, 1"x8"	11.81	12.35	12.21	12.67	11.70	12.55	11.75	12.95	12.29	12.83
Com. boards, No. 2, S2S, 1"x12"	12.42	13.46	13.16	13.43	12.76	13.01	12.74	13.30	12.96	13.80
Timbers, S1S1E, 6"x8"–16'	12.57	13.52	13.75	13.77	12.40	13.34	14.44	13.47	12.28	14.51
Car siding, B and better, 1"x4" & 6"x9'–18'	18.85	23.10	18.78	22.60	18.81	22.22	19.96	23.19	19.13	20.67
Com. car lining, No. 1, 1"x6"x10'–20'	14.75	15.64	14.10	15.55	14.39	15.95	16.05	16.63	15.06	16.29
Lath No. 1, 3/8"	1.78	......	1.97	1.84	1.92	1.79	1.92	1.89	1.95	1.80
Mill run (av. price of lumber)	**13.84**	**14.25**	**14.42**	**14.78**	**14.08**	**14.61**	**14.21**	**14.80**	**14.03**	**14.28**

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

EASTERN SOFTWOODS—Continued.

SPECIES AND GRADE.	MISSOURI.		FLORIDA.		GEORGIA.		SOUTH CAROLINA.		NORTH CAROLINA.	
	1911	1912	1911	1912	1911	1912	1911	1912	1911	1912
NORTH CAROLINA PINE.										
Flooring, No. 2, 1″x4″x10′–16′	......	......	......	......	......	......	$19.43	$21.38	$20.54	$21.88
Flooring, No. 3, 1″x4″x10′–16′	......	......	......	......	......	......	15.41	17.50	15.64	17.87
Dimension (air-dried), 2″x8″–16′ and under	......	......	......	......	......	......	11.14	12.43	11.77	12.64
Roofers, 1″x8″, D. & M.	......	......	......	......	......	......	11.65	13.51	12.52	14.04
Partition No. 1, 13/16″x3½″, 10′–16′	......	......	......	......	......	......	23.10	24.29	23.49	25.05
No. 1 edge 4/4, under 12″	......	......	......	......	......	......	21.54	21.30	19.50	21.54
Box edge 4/4, under 12″	......	......	......	......	......	......	10.70	11.83	10.70	12.29
Mill run (av. price of lumber)	......	......	......	......	......	......	**13.43**	**13.86**	**13.49**	**14.22**
YELLOW PINE. (Mississippi Valley Mills.)										
Flooring, B, flat, 13/16″x3¼″	$20.50	$21.00	......	......	......	......	......	......	......	......
Finish, B and better, 6″ and wider	21.22	24.75	......	......	......	......	......	......	......	......
Dimension No. 1, S1S1E 2″x8″–16′	14.13	15.86	......	......	......	......	......	......	......	......
Com. boards, No. 1, S2S, 1″x10″	14.38	16.50	......	......	......	......	......	......	......	......
Com. boards, No. 2, S2S, 1″x8″	12.82	14.13	......	......	......	......	......	......	......	......
Mill run (av. price of lumber)	**13.65**	**13.61**	......	......	......	......	......	......	......	......
YELLOW PINE. (Atlantic Coast Mills.)										
Finish, B and better, 6″ and wider	......	......	$21.07	......	$20.92	$21.27	......	......	......	......
Flooring, B and better, heart rift, 13/16″x2½″	......	......	39.83	......	39.00	......	......	......	......	......
Flooring, B and better, sap rift, 13/16″x2½″	......	......	27.83	......	27.54	32.33	......	......	......	......
Flooring, B, heart rift, 13/16″x2½″	......	......	......	......	37.04	35.00	......	......	......	......
Flooring, B, sap rift, 13/16″x2½″	......	......	......	......	28.25	29.19	......	......	......	......
Flooring, B, sap flat, 13/16″x3¼″	......	......	19.09	$20.38	18.97	20.25	......	......	......	......
Com. boards, No. 1, S2S, 1″x10″x 10′–16′	......	......	17.70	16.00	17.13	19.39	......	......	......	......
Com. boards, No. 2, S2S, 1″x10″x 10′–16′	......	......	12.38	11.33	12.46	14.11	......	......	......	......
(Merchantable grade, sail.) Plank and dimensions:										
Sizes 2″x6″ to 8″x8″, average 24′	......	......	12.39	13.31	12.38	13.76	......	......	......	......
Sizes 2″x9″ to 10″x10″, average 24′	......	......	12.57	15.14	14.14	15.75	......	......	......	......
Sizes 2″x12″ to 12″x12″, average 24′	......	......	16.47	19.54	16.64	19.12	......	......	......	......
Sizes 2″x14″ to 14″x14″, average 24′	......	......	18.50	22.44	20.00	22.53	......	......	......	......
Sizes 2″x16″ to 16″x16″, average 24′	......	......	21.24	24.33	23.65	26.05	......	......	......	......
Mill run (av. price of lumber)	......	......	**14.00**	**14.35**	**13.39**	**14.34**	......	......	......	......

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

EASTERN SOFTWOODS—Continued.

SPECIES AND GRADE.	VIRGINIA.		WEST VIRGINIA.		PENNSYLVANIA.		NEW YORK.		NEW HAMPSHIRE.	
	1911	1912	1911	1912	1911	1912	1911	1912	1911	1912
NORTH CAROLINA PINE.										
Flooring, No. 2, 1"x4"x10'–16'	$22.07	$22.80	......	......	......	......	......	......	......	......
Flooring, No. 3, 1"x4"x10'–16'	16.42	18.50	......	......	......	......	......	......	......	......
Dimension (air-dried), 2"x8"–16' and under	12.21	12.42	......	......	......	......	......	......	......	......
Roofers, 1"x8", D. & M	12.83	15.90	......	......	......	......	......	......	......	......
Partition No. 1, 13/16"x3½", 10'–16'	22.41	......	......	......	......	......	......	......	......	......
No. 1, edge 4/4, under 12"	23.40	......	......	......	......	......	......	......	......	......
Box edge, 4/4, under 12"	11.38	12.95	......	......	......	......	......	......	......	......
Mill run (av. price of lumber)	**13.04**	**13.21**	......	......	......	......	......	......	......	......
LAKE STATES HEMLOCK.										
2" piece stuff, S1S1E, 2"x4"–16'	......	......	......	......	......	......	$18.15	$19.39	......	......
Boards, No. 1, S1S, 1"x8"–16'	......	......	......	......	......	......	18.03	......	......	......
Timbers, rough, 4"x4" to 8"x8"–16'	......	......	......	......	......	......	17.81	18.75	......	......
Fencing, No. 1, S1S, 1"x6"	......	......	......	......	......	......	17.88	......	......	......
Lath No. 1, ⅜"–4'	......	......	......	......	......	......	3.82	......	......	......
EASTERN STATES HEMLOCK.										
8/4 merch., 4" to 12", 10' to 20'	......	......	$15.76	$17.20	$18.82	$18.00	......	......	$19.00	......
4/4 merch., 6" and 8"–16'	......	......	14.93	17.00	19.34	17.67	......	......	17.90	$18.67
4/4 merch., 10" and 12"–16'	......	......	16.47	20.20	20.25	19.38	......	......	......	......
4/4 merch. boards, 6" and up, S1S, clipped, 12'–16'	......	......	14.75	......	19.25	18.50	......	......	17.20	18.68
4/4 boards, No. 2, 1"x4"–12", 6'–20'	......	......	11.54	14.67	14.25	17.88	......	......	......	......
Mill run, mill culls out	......	......	15.13	17.00	......	18.27	16.75	18.08	16.75	17.50
Mill culls	......	......	6.42	6.42	10.75	......	9.44	10.50	......	......
Mill run (av. price of lumber)	......	......	**14.66**	**14.64**	**15.54**	**15.41**	**15.50**	**15.98**	**14.89**	**15.08**
WHITE PINE.										
Mill run (av. price of lumber)	......	......	......	......	**20.17**	**21.33**	**19.87**	**21.07**	**17.28**	**17.61**
NEW ENGLAND SPRUCE.										
Merch. frames, 8" and under, 20' and under	......	......	......	......	......	......	......	......	21.05	21.45
Merch. frames, 10", 20' and under	......	......	......	......	......	......	......	......	22.95	22.79
Merch. random, 10", 8' to 20'	......	......	......	......	......	......	......	......	20.04	23.10
Merch., 2"x7" and under, 8' to 20'	......	......	......	......	......	......	......	......	17.82	19.76
Merch., 2"x8" and up, 8' to 20'	......	......	......	......	......	......	......	......	19.11	......
Lath, 1⅝"	......	......	......	......	......	......	......	......	3.35	3.67
Mill run (av. price of lumber)	......	......	......	......	......	......	......	......	**17.67**	**18.02**
ADIRONDACK SPRUCE.										
Mill run, mill culls out	......	......	......	......	......	......	18.60	19.44	......	......
No. 1 and clear	......	......	......	......	......	......	30.15	30.03	......	......
No. 2	......	......	......	......	......	......	19.48	20.90	......	......
No. 3	......	......	......	......	......	......	16.63	16.48	......	......
Mill culls	......	......	......	......	......	......	11.45	11.25	......	......
Mill run (av. price of lumber)	......	......	......	......	......	......	**17.80**	**18.42**	......	......
WEST VIRGINIA SPRUCE.										
Merch. frames, 3"x4" to 8"x8", 10'–16'	......	......	17.74	18.88	......	......	......	......	......	......
Merch. frames, 2"x12" to 12"x12", 10'–16'	......	......	20.38	20.61	......	......	......	......	......	......
Boards, merch., 1"x12", 10'–20'	......	......	21.42	21.95	......	......	......	......	......	......
Boards, box, 1"x4"–12"	......	......	14.58	16.40	......	......	......	......	......	......
Mill run (av. price of lumber)	......	......	**17.30**	**17.14**	......	......	......	......	......	......

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

EASTERN SOFTWOODS—Continued.

SPECIES AND GRADE.	VERMONT.		MAINE.		MINNESOTA.		WISCONSIN.		MICHIGAN.	
	1911	1912	1911	1912	1911	1912	1911	1912	1911	1912
LAKE STATES HEMLOCK.										
2″ piece stuff, S1S1E, 2″x4″–16′	......	......	......	......	......	......	$15.58	$16.84	$15.13	$16.52
Boards, No. 1, S1S, 1″x8″–16′	......	......	......	......	......	......	16.96	18.08	16.29	17.69
Timbers, rough, 4″x4″ to 8″x8″–16′	......	......	......	......	......	......	16.46	17.79	15.96	16.85
Fencing, No. 1, S1S, 1″x6″	......	......	......	......	......	......	15.34	17.04	15.36	17.18
Lath, No. 1, ⅜″–4′	......	......	......	......	......	......	3.29	3.40	3.45	3.66
Mill run (av. price of lumber)	......	......	......	......	......	......	**13.03**	**13.00**	**12.44**	**13.19**
EASTERN STATES HEMLOCK.										
8/4 merch., 4″ to 12″, 10′ to 20′	$16.88	$16.75	$17.51	$16.79	......	......	......	......	......	......
4/4 merch., 6″ and 8″–16′	16.67	......	15.80	16.67	......	......	......	......	......	......
4/4 merch., 10″ and 12″–16′	18.79	17.50	18.00	......	......	......	......	......	......	......
4/4 merch. boards, 6″ and up, S1S, clipped, 12′–16′	16.40	16.71	16.48	18.44	......	......	......	......	......	......
4/4 boards, No. 2, 1″x4″–12″, 6′–20′	......	......	13.80	16.33	......	......	......	......	......	......
Mill run, mill culls out	16.03	16.72	15.67	16.58	......	......	......	......	......	......
Mill culls	11.38	9.67	10.21	10.80	......	......	......	......	......	......
Mill run (av. price of lumber)	**14.65**	**15.59**	**14.64**	**14.53**	......	......	......	......	......	......
WHITE PINE.										
Selects, C and better, 5/4 (M. L.)	......	......	......	......	$54.72	$54.51	57.75	57.06	61.75	......
Inch finish, C selects, 10″ (M. L.)	......	......	......	......	46.49	46.48	48.53	48.04	50.54	47.33
Shop No. 1, 8/4 (M. L.)	......	......	......	......	47.78	47.65	50.55	48.84	52.63	53.38
Shop No. 3, 5/4 (M. L.)	......	......	......	......	25.24	23.23	26.10	24.02	29.34	27.42
Beveled siding, C 6″–16′	......	......	......	......	25.52	23.94	25.93	24.96	26.14	26.33
Boards No. 2, 1″x8″–16′	......	......	......	......	23.30	22.43	24.35	23.56	27.28	26.38
Boards No. 3, 12″, 10′–20′	......	......	......	......	20.36	20.53	21.07	21.09	23.59	25.67
Boards No. 4, mixed widths, 10′–20′	......	......	......	......	12.79	14.32	12.66	14.65	13.46	13.50
Fencing, No. 2, S1S, 6″–16′	......	......	......	......	26.05	25.02	26.46	25.53	28.39	28.50
Lath, No. 1 (W. P.)	......	......	......	......	3.78	3.63	3.70	3.71	3.86	3.92
Lath, No. 1 (mixed)	......	......	......	......	3.30	3.27	3.28	3.40	3.46	3.45
Mill run (av. price of lumber)	**17.23**	**18.72**	**18.30**	**18.19**	**18.67**	**18.91**	**19.56**	**20.34**	**20.96**	**22.67**
NEW ENGLAND SPRUCE.										
Merch. frames, 8″ and under, 20′ and under	21.22	20.90	19.04	19.85	......	......	......	......	......	......
Merch. frames, 10″, 20′ and under	23.13	22.50	21.89	21.49	......	......	......	......	......	......
Merch. random, 10″, 8′ to 20′	21.67	......	18.86	19.95	......	......	......	......	......	......
Merch., 2″x7″ and under, 8′ to 20′	20.25	22.25	16.25	17.87	......	......	......	......	......	......
Merch., 2″x8″ and up, 8′ to 20′	21.56	22.50	17.70	19.17	......	......	......	......	......	......
Lath, 1⅝″	......	......	3.01	3.17	......	......	......	......	......	......
Mill run (av. price of lumber)	**17.23**	**18.18**	**16.96**	**17.40**	......	......	......	......	......	......

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

HARDWOODS AND CYPRESS.

SPECIES AND GRADE.	MISSOURI.		ARKANSAS.		LOUISIANA.		MISSISSIPPI.		ALABAMA.	
	1911	1912	1911	1912	1911	1912	1911	1912	1911	1912
ASH.										
Firsts and seconds, 4/4	......	......	$35.94	$36.64	$35.15	$36.30	$35.26	$34.88	$35.59	$34.50
No. 1 common, 4/4	......	......	20.13	21.42	19.32	19.74	20.58	22.33	22.67	21.08
No. 2 common, 4/4	......	......	10.93	11.25	10.27	10.88	10.38	10.97	13.25	11.14
Mill run (av. price of lumber)	......	......	**20.60**	**20.33**	**21.36**	**18.67**	**21.50**	......	**18.67**	......
COTTONWOOD.										
Firsts and seconds, 4/4, 6″ to 12″	......	......	24.05	25.29	23.26	23.78	25.03	26.02	......	......
Box boards, 4/4, 13″ to 17″	......	......	46.84	47.63	44.38	44.47	47.33	44.10	......	......
No. 1 common, 4/4	......	......	18.05	21.21	15.85	18.86	17.68	19.73	......	......
No. 2 common, 4/4	......	......	13.22	15.96	11.55	14.47	13.39	14.48	......	......
Mill run (av. price of lumber)	......	......	**18.44**	......	**18.75**	**20.62**	**20.18**	......	......	......
CYPRESS.										
Firsts and seconds, clear, 4/4	......	......	33.50	33.55	34.87	34.66	33.11	32.67	......	......
Selects, 4/4	$30.12	$28.19	29.22	28.63	30.16	29.90	29.21	28.60	......	......
Shop No. 1, 4/4	19.01	18.06	18.84	18.48	18.09	17.78	18.69	19.00	......	......
No. 1 common, 4/4, random widths	14.76	14.06	13.06	13.11	14.64	14.87	13.33	......	......	......
No. 2 common, 4/4, random widths	10.70	10.17	9.20	8.85	8.15	9.20	9.62	......	......	......
Mill run (av. price of lumber)	**17.33**	......	**18.95**	**18.88**	**20.95**	**20.19**	......	......	......	......
CYPRESS SHINGLES.										
Bests, 5″	......	......	3.43	......	3.39	3.40	......	......	......	......
Primes, 5″	......	......	2.43	2.40	2.57	2.50	......	......	......	......
GUM.										
Firsts and seconds, 4/4, red	30.18	29.00	29.35	29.83	29.25	31.23	29.63	31.89	......	......
No. 1 common, 4/4, red	18.20	......	16.88	17.80	17.75	18.88	18.54	18.98	......	......
Firsts and seconds, 4/4, sap	16.83	......	15.48	16.41	15.67	16.73	16.06	17.25	......	......
No. 1 common, 4/4, sap	12.87	12.50	11.21	12.04	10.61	12.19	12.08	12.92	......	......
No. 2 common, 4/4	9.99	10.50	8.33	9.52	7.37	8.95	9.07	10.47	......	......
Mill run (av. price of lumber)	**12.46**	**11.14**	**12.35**	**13.02**	**13.46**	**14.67**	**12.71**	......	......	......
HICKORY.										
Firsts and seconds, 8/4	......	......	45.18	46.51	......	......	......	......	......	......
No. 1 common, 8/4	......	......	23.76	25.69	......	......	......	......	......	......
No. 2 common, 8/4	......	......	10.57	12.00	......	......	......	......	......	......
Mill run (av. price of lumber)	......	......	**22.81**	......	......	......	......	......	......	......
MAPLE.										
No. 1 common and better, 4/4, soft	......	......	18.50	......	......	......	......	......	......	......
No. 3 common, 4/4, soft	......	......	5.75	......	......	......	......	......	......	......
Mill run (av. price of lumber)	**15.03**	**13.00**	**14.29**	**15.17**	......	......	......	......	......	......
PLAIN OAK.										
Firsts and seconds, 4/4	37.55	37.62	38.35	40.13	38.76	39.16	39.17	40.36	37.28	34.75
No. 1 common, 4/4	22.22	23.95	21.54	22.75	20.92	20.96	22.10	22.46	23.61	21.08
No. 2 common, 4/4	11.86	11.63	11.16	12.20	10.62	10.66	11.35	12.06	11.34	11.00
No. 3 common, 4/4	6.41	6.17	5.61	5.89	5.30	6.00	4.83	5.00	8.27	......
Mill run (av. price of lumber)	**15.08**	**15.50**	**18.96**	**20.33**	**18.26**	**21.25**	**20.06**	**22.17**	**18.50**	**21.25**
RED QUARTERED OAK.										
Firsts and seconds	......	......	50.65	50.00	......	......	49.93	51.02	......	......
No. 1 common, 4/4	......	......	29.16	28.59	......	......	29.49	30.52	......	......
No. 2 common, 4/4	......	......	15.60	15.31	......	......	15.65	16.94	......	......

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

HARDWOODS AND CYPRESS—Continued.

SPECIES AND GRADE.	MISSOURI.		ARKANSAS.		LOUISIANA.		MISSISSIPPI.		ALABAMA.	
	1911	1912	1911	1912	1911	1912	1911	1912	1911	1912
WHITE QUARTERED OAK.										
Firsts and seconds, 4/4	......	......	$66.51	$66.84	......	......	$67.87	$66.09	$67.42	$63.00
No. 1 common, 4/4	......	......	38.53	38.39	......	......	37.89	37.86	37.98	34.67
No. 2 common, 4/4	......	......	19.83	19.08	......	......	18.33	18.67	17.88	16.32
YELLOW POPLAR.										
Firsts and seconds, 4/4	......	......	......	......	......	......	......	......	46.79	45.13
Saps or selects, 4/4	......	......	......	......	......	......	......	......	32.38	32.00
No. 1 common, 4/4	......	......	......	......	......	......	......	......	25.19	24.21
No. 2 common, 4/4	......	......	......	......	......	......	......	......	13.59	13.58
Mill run (av. price of lumber)	......	......	......	......	......	......	......	......	**19.24**	**21.75**
TUPELO.										
Firsts and seconds, clear, random, 4/4	......	......	19.17	19.50	$18.84	$20.02	......	......	......	......
No. 1 common, random, 4/4	......	......	13.67	13.67	13.17	14.25	......	......	......	......
Mill run (av. price of lumber)	......	......	......	......	**12.86**	**13.61**	......	......	......	......

SPECIES AND GRADE.	FLORIDA.		NORTH CAROLINA.		VIRGINIA.		TENNESSEE.	
	1911	1912	1911	1912	1911	1912	1911	1912
ASH.								
Firsts and seconds, 4/4	....	....	$38.29	$38.48	$36.88	$37.08	$38.06	$36.51
No. 1 common, 4/4	....	....	25.36	24.84	23.61	25.33	24.00	22.86
No. 2 common, 4/4	....	....	14.94	12.50	13.23	12.11	13.16	12.36
Mill run (av. price of lumber)	....	....	**17.50**	....	**20.00**	....	**20.17**	**20.50**
BASSWOOD.								
Firsts and seconds, 4/4	....	....	32.98	33.00	31.58	32.33	31.60	30.97
No. 1 common, 4/4	....	....	22.75	23.00	20.72	22.03	21.75	20.83
No. 2 common, 4/4	....	....	13.36	13.33	11.23	11.86	13.36	12.27
Log run	....	....	21.25	....	19.75	20.51	20.72	20.85
Mill run (av. price of lumber)	....	....	**19.33**	....	**15.83**	**16.67**	**19.80**	**18.06**
CHESTNUT.								
Firsts and seconds, 4/4	....	....	40.78	40.93	40.48	41.00	38.53	38.38
No. 1 common, 4/4	....	....	26.45	29.12	28.53	29.69	25.99	26.43
Sound wormy, 4/4	....	....	11.45	10.96	11.39	11.62	12.44	12.35
No. 3 common, 4/4	....	....	7.21	7.15	6.56	7.05	6.88	7.59
Mill run (av. price of lumber)	....	....	**15.92**	....	**15.15**	**16.20**	**16.91**	**18.22**
CYPRESS.								
Firsts and seconds, clear, 4/4	$35.75	$35.26	....	....	....	....	....	....
Selects, 4/4	31.39	30.50	....	....	....	....	....	....
Shop No. 1, 4/4	20.53	20.59	....	....	....	....	....	....
No. 1 common, 4/4, random widths	16.13	15.89	....	....	....	....	....	....
No. 2 common, 4/4, random widths	11.41	11.55	....	....	....	....	....	....
Mill run (av. price of lumber)	**22.00**	**20.00**	**19.83**	**17.50**	....	....	....	....
CYPRESS SHINGLES.								
Bests, 5″	4.17	4.08	....	....	....	....	....	....
Primes, 5″	3.60	3.17	....	....	....	....	....	....
GUM.								
Mill run (av. price of lumber)	....	....	**10.70**	**10.97**	**11.63**	**12.58**	**12.33**	**11.33**

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

HARDWOODS AND CYPRESS—Continued.

SPECIES AND GRADE.	FLORIDA.		NORTH CAROLINA.		VIRGINIA.		TENNESSEE.	
	1911	1912	1911	1912	1911	1912	1911	1912
HICKORY.								
Firsts and seconds, 8/4							$46.66	$50.00
No. 1 common, 8/4							27.99	27.61
No. 2 common, 8/4							11.93	12.78
Mill run (av. price of lumber)							**21.55**	**22.33**
MAPLE.								
Mill run (av. price of lumber)							**14.44**	**15.47**
PLAIN OAK.								
Firsts and seconds, 4/4			$39.00	$40.22	$38.40	$39.77	37.58	37.74
No. 1 common, 4/4			26.29	26.77	26.99	26.86	24.45	24.51
No. 2 common, 4/4			14.13	14.98	13.68	14.71	13.03	13.30
No. 3 common, 4/4			7.31	8.14	7.40	7.77	7.15	7.31
Mill run (av. price of lumber)			**17.67**		**15.85**	**17.02**	**20.68**	**20.79**
RED QUARTERED OAK.								
Firsts and seconds							49.37	49.89
No. 1 common, 4/4							31.10	29.82
No. 2 common, 4/4							16.62	16.99
WHITE QUARTERED OAK.								
Firsts and seconds, 4/4							64.69	66.20
No. 1 common, 4/4							38.35	38.51
No. 2 common, 4/4							18.68	19.32
YELLOW POPLAR.								
Firsts and seconds, 4/4			50.51	50.67	46.97	47.83	48.33	47.53
Saps or selects, 4/4			36.00	36.87	35.05	35.92	36.20	35.81
No. 1 common, 4/4			28.45	28.53	27.44	27.68	26.49	26.43
No. 2 common, 4/4			15.39	15.20	16.22	16.27	15.14	14.71
Mill run (av. price of lumber)			**23.43**	**22.50**	**21.36**	**24.02**	**28.22**	**24.59**

SPECIES AND GRADE.	WEST VIRGINIA.		KENTUCKY.		OHIO.		INDIANA.	
	1911	1912	1911	1912	1911	1912	1911	1912
ASH.								
Firsts and seconds, 4/4	$42.52	$40.47	$38.05	$39.20	$42.02	$38.64	$40.07	$39.18
No. 1 common, 4/4	28.17	28.47	24.17	24.47	28.76	28.03	25.23	25.91
No. 2 common, 4/4		14.89		13.79	18.55	17.28	18.78	16.39
Mill run (av. price of lumber)	**21.23**	**18.00**	**20.89**	**19.75**	**23.57**		**24.44**	**22.15**
BASSWOOD.								
Firsts and seconds, 4/4	35.60	34.95	32.34		31.52	31.60	31.81	33.89
No. 1 common, 4/4	25.67	24.65	21.38		22.33	21.96	22.32	23.94
No. 2 common, 4/4	16.47	15.62	12.50	14.33	15.48	14.75	15.35	16.39
Log run	22.49	21.93	21.71	21.83		21.62	22.29	23.77
Mill run (av. price of lumber)	**18.56**	**19.10**	**19.19**		**20.36**	**18.67**	**20.40**	**18.67**
BEECH.								
Firsts and seconds, 4/4	21.50				21.61	25.67	22.35	21.59
No. 1 common, 4/4	16.50	12.87			17.91	17.90	17.03	17.38
Mill run (av. price of lumber)	**12.50**	**11.39**	**12.66**	**11.73**	**15.72**	**14.49**	**15.74**	**15.41**

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

HARDWOODS AND CYPRESS—Continued.

SPECIES AND GRADE.	WEST VIRGINIA.		KENTUCKY.		OHIO.		INDIANA.	
	1911	1912	1911	1912	1911	1912	1911	1912
UNSELECTED BIRCH.								
Firsts and seconds, 4/4	$31.73	....	....	....	....	....	....	....
No. 1 common, 4/4	21.53	....	....	....	....	....	....	....
No. 2 common, 4/4	11.74	$14.00	....	....	....	....	....	....
No. 2 common and better, 4/4, or log run	18.49	19.28	....	....	....	....	....	....
Mill run (av. price of lumber)	**16.40**	**16.79**	....	....	....	....	....	....
CHESTNUT.								
Firsts and seconds, 4/4	43.72	43.25	$39.44	$39.80	$38.84	$36.94	....	....
No. 1 common, 4/4	31.72	31.51	27.56	26.88	26.85	28.53	....	....
Sound wormy, 4/4	13.15	13.66	12.70	13.98	15.66	15.94	....	....
No. 3 common, 4/4	8.37	8.71	7.44	8.19	11.22	....	....	....
Mill run (av. price of lumber)	**15.00**	**16.19**	**18.42**	....	**18.93**	....	....	....
ELM.								
Firsts and seconds, 8/4, rock	....	....	....	....	....	....	$37.57	$36.33
No. 1 common and better, 8/4, rock	....	....	....	....	....	....	29.00	27.50
No. 2 common and better, 8/4, rock	....	....	....	....	....	....	....	22.75
No. 1 common and better, 4/4, soft	....	....	....	....	22.47	24.75	23.23	23.03
No. 2 common and better, 4/4, soft	....	....	....	....	17.06	19.17	18.88	20.66
Mill run (av. price of lumber)	....	....	....	....	....	....	**17.22**	**17.23**
HICKORY.								
Firsts and seconds, 8/4	....	....	50.00	45.29	50.06	46.06	48.45	48.39
No. 1 common, 8/4	27.67	....	31.00	27.00	29.69	30.17	30.86	30.19
No. 2 common, 8/4	17.00	16.00	....	14.29	19.52	20.00	19.26	18.59
Mill run (av. price of lumber)	**20.76**	**20.39**	**22.13**	**21.45**	**26.68**	**28.39**	**26.48**	**26.63**
MAPLE.								
Firsts and seconds, 4/4, hard	27.18	28.19	....	....	26.16	25.58	26.20	26.32
No. 1 common, 4/4, hard	18.32	18.81	....	....	19.07	18.17	19.62	20.05
No. 1 common and better, 4/4, soft	23.65	21.50	....	....	20.90	21.67	22.27	21.14
No. 3 common, 4/4, soft	7.67	....	....	....	13.33	13.00	14.50	12.61
Mill run (av. price of lumber)	**15.19**	**15.56**	**14.69**	**14.33**	**17.12**	**16.05**	**17.01**	**16.04**
PLAIN OAK.								
Firsts and seconds, 4/4	43.95	45.08	39.92	40.37	42.39	40.22	41.09	40.43
No. 1 common, 4/4	31.44	32.64	25.58	26.38	28.03	28.44	26.46	27.04
No. 2 common, 4/4	17.45	17.91	15.27	15.93	20.09	18.97	17.56	17.50
No. 3 common, 4/4	8.33	8.99	8.61	9.39	12.68	12.40	11.74	10.30
Mill run (av. price of lumber)	**18.60**	**20.15**	**19.78**	**18.29**	**21.65**	**22.13**	**22.18**	**20.33**
RED QUARTERED OAK.								
Firsts and seconds, 4/4	....	....	53.23	54.28	....	....	53.50	52.31
No. 1 common, 4/4	....	....	32.31	34.39	....	....	34.20	32.80
No. 2 common, 4/4	....	....	19.01	19.50	....	....	19.80	18.99
WHITE QUARTERED OAK.								
Firsts and seconds, 4/4	....	....	67.09	67.69	72.15	67.50	70.57	69.77
No. 1 common, 4/4	....	....	40.93	41.88	43.86	41.96	42.43	41.30
No. 2 common, 4/4	....	....	22.56	21.61	24.47	24.67	23.66	23.29
YELLOW POPLAR.								
Firsts and seconds, 4/4	51.88	51.51	48.78	49.21	52.77	49.20	50.54	47.46
Saps or selects, 4/4	38.09	37.23	36.72	37.07	38.26	40.00	38.60	38.77
No. 1 common, 4/4	33.29	34.56	28.63	29.17	31.33	31.16	29.50	29.33
No. 2 common, 4/4	21.04	20.69	16.82	17.31	21.03	20.16	18.58	18.67
Mill run (av. price of lumber)	**26.64**	**25.70**	**27.43**	**23.60**	**25.62**	**23.33**	**27.14**	....

TABLE 37.—WHOLESALE PRICES OF LUMBER (M FEET B. M.), BY GRADES AND "MILL-RUN," F. O. B. MILL: 1911 AND 1912—Continued.

HARDWOODS AND CYPRESS—Continued.

SPECIES AND GRADE.	MICHIGAN.		WISCONSIN.		PENNSYLVANIA.		NEW YORK.	
	1911	1912	1911	1912	1911	1912	1911	1912
ASH.								
Firsts and seconds, 4/4	$39.66	$39.22	$36.67	$37.54	$36.94	$40.00	$42.96	$39.98
No. 1 common, 4/4	26.70	26.18	23.45	23.94	25.75	26.47	28.33	26.96
No. 2 common, 4/4	....	17.53	....	14.42	....	....	....	18.17
Mill run (av. price of lumber)	**21.87**	**20.68**	**18.73**	**18.28**	**21.60**	**21.86**	**21.46**	**20.88**
BASSWOOD.								
Firsts and seconds, 4/4	36.37	35.82	33.81	34.51	31.00	....	34.23	30.75
No. 1 common, 4/4	25.46	24.87	22.85	23.58	....	24.50	25.64	25.48
No. 2 common, 4/4	16.54	16.68	13.76	16.04	....	....	19.74	....
Log run	24.33	24.37	22.34	23.34	22.30	21.88	21.90	22.79
Mill run (av. price of lumber)	**20.17**	**20.06**	**19.03**	**18.81**	**20.23**	**18.67**	**20.81**	**20.29**
BEECH.								
Firsts and seconds, 4/4	22.59	24.87	....	....	19.16	....	22.67	22.80
No. 1 common, 4/4	16.93	17.14	....	16.33	14.26	16.00	17.41	16.44
Mill run (av. price of lumber)	**13.13**	**13.62**	**13.29**	**11.97**	**14.87**	**12.64**	**14.43**	**13.93**
UNSELECTED BIRCH.								
Firsts and seconds, 4/4	34.36	35.99	34.22	34.74	....	....	35.45	34.20
No. 1 common, 4/4	20.80	22.47	19.51	20.14	....	....	24.12	22.27
No. 2 common, 4/4	13.63	14.84	11.38	12.11	....	....	13.36	13.50
No. 2 common and better, 4/4, or log run	22.43	22.96	20.79	21.99	....	....	18.67	....
Mill run (av. price of lumber)	**17.46**	**17.99**	**16.96**	**17.47**	**16.53**	**16.72**	**17.46**	**17.04**
CHESTNUT.								
Firsts and seconds, 4/4	....	....	....	....	37.02	34.50	....	....
No. 1 common, 4/4	....	....	....	....	26.41	24.03	....	....
Sound wormy, 4/4	....	....	....	....	16.99	16.79	....	....
No. 3 common, 4/4	....	....	....	....	12.92	12.94	....	....
Mill run (av. price of lumber)	....	....	....	....	**17.25**	**16.29**	**17.44**	**18.47**
ELM.								
Firsts and seconds, 8/4, rock	....	....	32.67	33.18	....	....	....	....
No. 1 common and better, 8/4, rock	23.33	....	26.30	23.71	....	....	....	....
No. 2 common and better, 8/4, rock	24.29	26.08	22.41	21.97	....	....	....	....
No. 1 common and better, 4/4, soft	29.16	28.27	25.15	26.02	....	....	....	....
No. 2 common and better, 4/4, soft	24.01	25.63	19.53	19.78	....	....	....	....
Mill run (av. price of lumber)	**18.75**	**17.50**	**17.81**	**16.52**	....	....	....	....
HICKORY.								
Mill run (av. price of lumber)	....	....	....	....	**22.00**	**20.55**	....	....
MAPLE.								
Firsts and seconds, 4/4, hard	28.40	29.57	25.79	26.77	23.38	26.65	26.36	29.92
No. 1 common, 4/4, hard	20.90	21.51	17.44	18.75	18.27	18.89	18.35	21.49
No. 1 common and better, 4/4, soft	....	21.77	19.72	23.72	22.00	21.15	....	20.67
No. 3 common, 4/4, soft	8.01	8.92	7.55	8.48	....	....	....	....
Mill run (av. price of lumber)	**15.34**	**15.46**	**14.83**	**15.16**	**16.45**	**16.19**	**16.52**	**16.08**

OPPORTUNITIES FOR PURCHASING NATIONAL FOREST TIMBER.

The National Forests contain nearly 590 billion feet of merchantable stumpage. The mature timber, which constitutes a large part of the total stand, is for sale. The more accessible bodies may be purchased in blocks of practically any desired size up to 100 million feet. Less accessible stumpage which requires a large investment for the construction of transportation facilities may be purchased in larger quantities of sufficient size to justify the investment in improvements. Applications up to one billion feet will be approved if the investment required necessitates the purchase of a body of that size under one contract.

The procedure for purchasing National Forest timber is extremely simple. Applications specifying the amount, species, and general location desired may be sent to the offices of the Forest Service at Washington, D. C.; Chicago, Ill.; Missoula, Mont.; Denver, Colo.; Albuquerque, N. Mex.; Ogden, Utah; San Francisco, Cal.; and Portland, Oreg. Advertisement at a fixed minimum price is required by law for at least 30 days. The timber is then awarded to the highest bidder and the sale completed by execution of the contract stating the amount and location of the stumpage, the stumpage rates, and the conditions under which the timber shall be removed.

The contract requirements have been prepared by practical lumbermen and perfected by the experience gained in the administration of several thousand sales. They are adapted to the local conditions as to topography, size of the timber, and logging methods. That they are eminently practical is demonstrated by the fact that some 375 million feet are cut each year under these requirements by lumbermen all over the West.

Sufficient time is permitted for the removal of the amount purchased under local conditions of logging and manufacture. The time is gauged, however, to require continuous operation at a reasonable rate and does not permit the holding of stumpage for speculative increases in value. The timber to be cut is designated by the forest officers. Either clean cutting, or partial cutting taking 70 to 80 per cent of the stumpage, is employed, depending upon the character of the timber and the best methods of securing new forest growth. Simple precautions are required to protect the uncut timber and young growth, and the disposal of slash by burning, either with or without piling, is necessary.

These requirements may increase the cost of logging from 50 to 75 cents a thousand feet over the usual cost on private holdings. The difference is always considered in appraising the value of the stumpage. Furthermore, an operator who buys National Forest timber has to make practically no investment at the outset for his stumpage, has no carrying charges for interest or taxes, and incurs practically no fire risk. He is required simply to pay for the timber as it is removed in advance deposits, which represent usually but the value of a month and a half's cut.

These are obvious advantages, particularly when extended over an operation of 10 or 15 years. As private stumpage is cut out in many of the old lumbering centers, operators will find, in the timber on the National Forests, new opportunities for manufacture under advantageous conditions.

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U. S. Bureau of
the Census.
Forest products :
lumber, lath, and
shingles, 1912.

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